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EMBELLISHMENTS.

January.—"Portrait." By C. C. KOUGH, Greensburg, Pa. Print on Special Rough Velox Paper. "Portrait." By BOYÉ & HABERNICHT, San Francisco, Cal.

February.—"Portrait of an Old Man." By D. D. SPELLMAN, Detroit, Mich. Print on Rough Velox Paper. "In Springtime." By JAMES ARTHUR, Detroit, Mich.

March.—"Portrait of a Child." By BOYÉ & HABERNICHT, San Francisco, Cal. Print on Special Rough Velox Paper. "A Combination Group." By VAN LOO & TROST, Toledo, O.

April.—"Mme. Emma Eames." By B. J. FALK, New York. Print on Special Portrait Velox Paper. "Bertha Galland and 'Nicky,'" and a "Portrait." Both by B. J. FALK, New York.

May.—"Ready for Fun." By PHILIP S. RYDER, Syracuse, N. Y. Print on Rough Velox Paper. "Edna May." From a copyrighted photograph. By PHILIP S. RYDER, Syracuse, N. Y.

June.—"Portrait." J. M. REIDSEMA, Kalamazoo, Mich. Print on Special Carbon Velox Paper. "The Light of Expectancy." From a copyrighted photograph. By EVAN D. EVANS, Ithaca, N. Y.

July.—"A Portrait by Hollinger." By W. M. HOLLINGER, New York. Print on Special Rough Velox Paper. "Portrait." By PHILIP S. RYDER, Syracuse, N. Y.

August.—"U. S. Volunteer." By G. H. LOREY, Saratoga Springs, N. Y. Print on Special Rough Velox Paper. "Glimpses of Newfoundland." By S. H. PARSONS, St. Johns, N. F.

September.—"A Willing Model." By A. W. JUDD, Chattanooga, Tenn. Platinogravure reproduction. "Willows." By GUSTAV HEINKE.

October.—"Portrait." By J. H. KEMP, Scranton, Pa. Eight supplement engravings illustrating "American Portraiture" By E. C. DINTURFF, W. M. BRENNER, LOUIS F. JANSEN, and HOMEIER & CLARK.

November.—"Portrait." By C. C. KOUGH, Greensburg, Pa. "The Prayer." By KNAFFL & BRO., Knoxville, Tenn. Portraits by MRS. CONDON-HENDRICKS, F. G. SCHUMACHER, H. A. COLLINGS, and ALFRED HOLDEN.

December.—"A Breath of Fresh Air." Engraved from a carbon by WILLIAM GILL, Colchester, England. Portraits by B. FRANK PUFFER, H. A. COLLINS, DUDLEY HOYT, JOHN H. KEMP, and others.

ILLUSTRATIONS.

AFTER the Storm, 125
Alcove in Falk Studio, 162
Aunt Chloe, 499

BACHRACH, D., 307
Bardwell, Jex, Portrait of, 73
Benjamin, F., 407, 408
Ben-Yusuf, Z., 76
Both Puzzled, 17
Boyé & Habernicht, 26, 28, 114, 115, 127
Boyé & Habernicht's Studio: Reception Room, 113

CANE FIELD, 497
Captain Sigsbee, 117
Celebration, a, 79
Chicago Festival, 25
Children, 261, 262
Circus Parade, 18
Clark, Elton W., 220
Conly, Boston, 126
Corner of Operating Room, Falk's Studio, 165
Cowles, W. W., 261, 266

DANCING Girl, 118
Detail of Stairway, Falk Studio, 162
Drawing Class in a Public School, 215
Dressing Rooms, Falk Studio, 165
Ducks, 19

EASTMAN, GEORGE, 263
Egyptian Portrait, ancient, 211
Eickemeyer, R., Jr., 497, 498, 499
Elsie Leslie, 76
Evans, E. D., 257, 259, 260
Evening Calm, 221

FALK Studio, Views in, 161, 162, 163, 164, 165, 166
Favorite Horse, a, 79
Fishing on River and Lake, 354

GAY, DANIEL F., 77
Gonzalez, Mrs. C. H. de, 404
Gray's Double Stigmat, 541, 542
Group of Caribou, 353

HALL, HENRY, 262
Hall of the Mosaics, 220
Hoffner, J. H., 267
Home Port, 77

IN the Bronx, 220
Italian Peasant Group, 306

JACK TURNER, 310
Jackson, A. L., 27
Judd, A. W., 401, 403
Judd, S. Wilson, 402

KEELER, W. M., 268
Keyser, E., in the Studio, 307
Kindergarten, 214
Kough, C. C., 22
Kupper, L. V., 217, 219, 221

LITTLE BESS, 539
Lovell, M. S., 125

MCCARTHY, M. R. F., 66, 69
Marsh, the, 125
Masure, L., 25
Miniature Portraits, 407, 408
Mudge, E. L., 258

NADAR, 355, 356
Natural History Kindergarten, 215
New Fruit, 174

OFFICE of Falk Studio, 161
Old Men, 266
Ophelia (Bronze presented to B. J. Falk), 166
Outdoor work, 219, 267

PACH BROS., 214, 215
Picking Time, 498
Pierce, H. H., 117, 118
Portraits of I. Benjamin, 407, 408; Boyé & Habernicht, 26, 28, 114, 115, 127; Ch. Chaplin, 358; E. D. Evans, 257, 259, 260; B. J. Falk, 167, 169, 170; Mrs. C. H. de Gonzalez, 404; Hollinger, 308, 312, 315, 317; A. L. Jackson, 27; A. W. Judd, 401, 403; S. Wilson Judd, 403; C. C. Kough, 22; L. V. Kupper, 217; M. R. F. McCarthy, 66, 69; E. L. Mudge, 258; Nadar, 355, 356; H. H. Pierce, 117, 118; F. W. Rice, 309, 313, 316; G. Rogers, 121; Philip S. Ryder, 305; Henry B. Shaw, 67, 68; D. D. Spellman, 65, 71, 72, 73; F. Ernst Zimmermann, 357
Prang, Louis, Portrait of, 70
Private Office, Falk Studio, 165
Prizes offered at National Convention, 213
Professional Work by Nadar, 355, 356
Public Schools, New York, 214, 215
Pyramids, Road to the, 123, 124

RANDALL, H., 306
Ray Filter Competition, 540, 543
Reception Room, Falk Studio, 162, 163
Rice, F. W., 309, 313, 316
Ritz, Art Studio, 70
Road to the Pyramids, 123, 124
Ryder, Philip S., and James F., 209

SALMON and Trout Fishing on River and Lake, 354
Scott, Winfield, 220, 221
Seeing Things, 74
Senses, the, 538
Shaw, Harry B., 67, 68
Snap in Sunshine, a 353
Spellman, D. D., 65, 71, 72, 73
State Capitol, Maryland, 406
Statue by Moretti, Falk Studio, 162
Strauss Studio after the Fire, 176

TAYLOR, J. W., 310
Towles, W. H., 548, 549

VILLAGE Celebrity, A, 78

WATKIN, H. E., 545, 546
Watson, J. E., 406
Woman of the Taltecs, 221

ZIMMERMANN, F ERNST, 357

INDEX

ABOUT the carbon picture, 20
knowledge, 416
method, 312
Address of Pirie MacDonald, 65
Agfa reducer, the, 531
Alum bath, 429
Amateur, the, 419
professional and the, 137
lesson to the photographer, 18
American Institute Salon, 48, 75
photography, 289
studios, 521
Ammonium persulphate, 44
An anonymous critic, 396
An appreciation, 268
Art in the Atlantic Monthly, 212
works: how to see and enjoy them, 371
Artificial illumination for enlarging, 135
reflections, 334

BACKGROUNDS, making and painting, 443
Backing, does it slow the plate? 379
plates, caramel for, 129
Bardwell's (Jex) lantern show, 430
Beck, O. W., address at convention, 343, 363
Better prices, how to get, 142
Between the studio and the printing-room, 437
Bichromate poisoning, 152
Blue print, the, 405
Boston studio, a new, 126
Boyé & Habernicht, 113
Bromide, 426
paper, 547
Bromides, toned, 150, 238
Bubbles, 388
Business methods applied to photography, 439

CARAMEL for plate backing, 129
Carbon, elementary, 275
Carbon picture, about the, 20
prints, intensification and after treatment of, 545
tissue, to dry, 264
work, 109
Ceramics by the pepper process, 182
Chance picture at the Philadelphia Salon of 1899, 102
Children, 261
Choice of a hand-camera, 24
Circulating interstate exhibit, 133
Citrates as restrainers, 244
Cleaning glass, 237
Clouds, 352
transferring from one negative to another, 41
Coins, photography, 494
Collodio-chloride emulsion, 526
Color, photographs in, 183
photography, Kromskop, 234
Colored photographs, 495
transparencies by absorption, 382
Coloring prints on fabrics, 112
Coming eclipse, 222
Competition, ray filter, 540
Composite pictures, 160
Composition of a picture, 200
Control in printing, 153
Convention and prosperity, 302
a success, 517
Iowa, 141
last call to, 290
Missouri, 235, 505
National, official report, 337
Nebraska, 48, 134
Ohio-Michigan, 375, 464
Pennsylvania, 282
pictorial exhibit at the, 368
pictures; what the judges thought, 374
railroad rates to, 329
the Indiana, 233
the New England, 474
Copying, 380
old documents, 303
Copyright and the American photographer, 385
bill, a new, 171
in England, 311
league, photographers', 92
Correction, an important, 310
Critic, an anonymous, 396
Criticism, 257
Crystal varnish, 265
Cult of the godlings, 292
Customer, treatment of the, 1

DABBS, B. L. H., 93
Daguerreotype, teachings of the, 34–80
Dallmeyer on telephotography, 32
Dark-room light, a safe, 6
Daylight development, 427
Developer; imogen, a new, 491
Developers, old and new, 138, 225, 279
tinkering with the, 58
Development and developers, 90
of illustration, 231
notes, 427
rapid, 448
and wholesale, 315
Do it now, 101
Dollar idea, a, 241
Double stigmat, Gray's, 541
Down South, 497

EASTMAN, GEORGE, 263
generous gift of, 199
Eclipse, the coming, 222
Editor's table, 47, 95, 143, 191, 238, 288, 335, 383, 431, 479, 520, 551
Elementary carbon, 275
Elimination of hypo, 422
Emulsion, collodio-chloride, 526
Emulsions, ripening, 518

England, copyright in, 311
Engraving methods, 207
Enlarged negatives, 156
Enlargements, 514
from small negatives, 286
Enlarging, artificial illumination for, 135
by sunlight and by electric light, 299
Era in art—and its closing, 7
Executive meeting P. A. A., 56
Exhibition at Detroit, recent, 107

FABRICS, prints on, 155
Failure, on, 33
Falk studio, the new, 161, 400
Ferroprussiate prints, 265
Fifth avenue showcases, 488
Figure, treatment of the, 401
Films, 471
plates *vs.*, 320
stripping from glass, 94
Fire at Strauss' studio, 127, 176
Fisherman's luck, 47
Flowers and fruits, 542
keeping fresh for photography, 503
Focusing in dark places, 423
Formulæ, hydroquinone, 277
Frames, 425
picture, 269
French, Benjamin, 93
Fugitive prints, 158

GENRE, 322
George Eastman, 263
generous gift of, 199
Glass, on cleaning, 237
for the studio, 330
Godlings, the cult of the, 292
Gold sodium-chloride, notes on, 463
Good negative, a, 186
words, 88
Gray's double stigmat, 541
Groups, 246
Gum-bichromate hints, 462
process, 16

HALATION and its remedy, 153
Hand-camera, choice of a, 24
workers, hints for, 428
Handwork before printing, 409
Hands in portraiture, 434
Heads, large, direct, 119
Heart to heart talk, 26
High class opening, a, 196
Holiday work near water, 267
Hog sense of retouching, 134
How "our picture" was made, 21
photography helps, 177
to be photographed, 193
to get better prices, 142
to make the idle cameras pay, 78
Hydroquinone formulæ, 277
Hypo, elimination of, 422
removal of, after fixing, 4

ILLUSTRATION, the development of, 231
Imogen; a new developer, 491
In natural colors, 358
Indiana convention, 233
Ingenious nonsense, 318
Ink, negative making, 160
Intensification, 511
Intensification and after-treatment of carbon prints, 545
and reduction of lantern-slides, 273
mercurial, by modern methods, 148
mercury, 424
Intensifier, a new, 95
Intensifiers for negatives or positives, 249
Interiors, 271
Interstate exhibit, a circulating, 133
Interview with James F. Ryder, 103
Iowa Convention, 141

KALLITYPE, 60
Knowledge, 278
about, 416
Kromskop color photography, 234

LANTERN show, Jex Bardwell's, 430
slides, intensification and reduction of, 273
Large heads direct, 119
Last call to the Convention, 290
Leading line, a, 180
Lens, a new wide-angle, 496
Lenses for large work, 387
for stereoscopic work, 16
for studio work, selection of, 250
stops, and perspective, 488
supplementary, for altering the focus of doublets, 228
taking care of, 291
Letters to Jack, 17, 73, 122, 172, 210, 248, 325
Library, the photographer's, 140
the value of a, 190
Lighting, 363
and the hands in portraiture, 434
in commercial photography, 29
in portraiture, 23
the question of studio, 185
Lines, 167
Local reduction, 328

MACHINERY, photographing, 472
Mafeking, photography at the siege of, 447
Man we want, the, 490
Mercurial intensification by modern methods, 148
Mercury intensification, 424
Metol formula, 63
Michigan-Ohio Convention, 375, 464
Middle course, the, 470
Miniature portrait, the, 407
Missouri, Photographers' Association of, 235
Convention, 505
Mosaics, 1901, 534
Mounting photographs on linen, 425
Mounts and mounting, 14

NATIONAL Convention, official report, 337
programme, 319
prizes, 213
Natural colors, in, 358
Nebraska P. A., 48, 134
Negative faking, 486
a good, 186
marking ink, 160
permanency of, 2
printing from a hard, 16
varnish, 208, 264
Negatives, enlarged, 156
reproduction as a means of improving, 12
spotting, 11
to reverse, 3
New Boston studio, 126

New copyright bill, 171
England Convention, 474
methods and formulæ, 503
News and notes, 63, 111, 159, 175, 255, 303, 400, 478, 495, 535
Nicholson's new trimmer, 314
Notes concerning portraiture, 398, 524
Novelties, 149

OBITUARY, 47, 93, 191
Official report, National Convention, 337
Ohio-Michigan Convention, 375, 464
Old men, portraits of, 266
people, portraits of, 71
processes, 59
vs. new methods in portraiture, 49, 97, 111, 145, 256
On failure, 33
Opening, a high class, 196
Orthochromatic work, 473
Ortol formula, 63
Our pictures, 46, 126, 166, 209, 281, 307, 406
Outdoor photography, 124
work, 219
Out-of-work, 467
Over-exposure, correction of, 503

PAINTINGS, to photograph, 360
Papers for professional photographers, 26, 116, 167, 216, 284
Patents, common sense about, 424
Pennsylvania Convention, 62, 282
Pepper process, ceramics by the, 182
Permanency of the negative, 2
Persistence, 457
Perspective, stops, lenses, and, 488
Persulphate, ammonium, 44
Philadelphia Photographic Salon, 243, 532
Photo-miniature, the, 420
Photographer and the schools, 214
Photographers' associations, 43
and their public, 391
copyright league, 92
library, 140
position, 151
window, 468
Photographic Mosaics, 1901, 534
Photographing paintings, 360
Photographs in color, 183
Photography in warm climates, 333
on tour, 426
Pictorial exhibit at the convention, 368
Picture, composition of a, 200
frames, 269
Pirie MacDonald, address by, 65
Plain paper, platinum toned prints on, 107
surface silver paper, 445
Plaster relief, photographs in, 184
Plate backing, 111
caramel for, 129
Plates, slow *vs.* rapid, for landscapes, 9
vs. films, 320
Platinotype paper, 323
toning, 204
Platinotypes, fugitive, 423
Platinum toned prints on plain paper, 107
Portland Camera Club exhibit, 48
Portrait, the miniature, 407
Portraits of old men, 71, 266
Portraiture at the Philadelphia Salon, 532
lighting in, 23
notes concerning, 398, 524
old *vs.* new methods in, 49, 97
Pose in portraiture, 116
Potassium permanganate in photography, use of, 459
Practical methods and formulæ, 208, 264, 448, 549
notes, 16
Prang, Louis, 7, 69
Printing, control in, 153
from a hard negative, 16
Prints on fabrics, 155
washing of, 331
Prize list for P. A. of A., 1900, 56
Professional and the amateur, 137
Programme of the National Convention, 319
Progress of photography, 340
Proofs, 458
and self-respect, 284
Prosperity, the convention and, 302
Protest, a, 537
Pyrol, 431

RAILROAD rates to the Convention, 329
Rapid and wholesale development, 315
Ray filter competition, 540
Recent exhibition at Detroit, 107
Reducer, Agfa, 531
Reduction, local, 328
and intensification, of lantern-slides, 273
Reflections, artificial, 334
Relief, photographs in plaster, 184
Reminescence, a, 539
Removal of hypo after fixing, 4
Reproduction as a means of improving negatives, 12
Restrainer, potassium cyanide as a, 479
Restrainers, citrates as, 244
Retouching, 309
hog sense of, 134
Reverie, a, 197
Reverse negatives, to, 3
Ryder, an interview with James F., 103

SAFE dark-room light, 6
Schools, the photographer and the, 214
Self-respect, proofs and, 284
Shade printing, 255
Showcases, Fifth avenue, 481
Silver paper, plain surface, 445
Sitters and the part they play in photography, 375
recommendation, the, 501
Slow *vs.* rapid plates for landscapes, 9
Snow, the time of, 548
Some of the needs of the hour, 104
Spoiled paper, 466
Spotting negatives, 11
Spots and spotting, 512
Stains on fingers and on prints, 188
of silver on negatives, 276
State associations, to the secretaries of, 433
Stereoscopic work, lenses for, 16
Strauss studio destroyed by fire, 127, 176
Stripping films from glass, 94
Studio building, 108, 418
glass for the, 330
lighting, the question of, 548
the new Falk, 161, 400
traditions out of doors, 305
work, selection of lenses for, 250
Studios, some American, 521
Study in blue, 245
Successful portrait, a, 500
Suggestion, a, 216
Supplementary lenses for altering the focus of doublets, 228

TAKING care of lenses, 291
Teachings of the daguerreotype, 34, 80
Telephotography, 326
as applied to astronomy, 147
Dallmeyer on, 32
Textile designs by photographic methods, 515
Time of snow, the, 548
Timely suggestion, 55
Tinkering with the developer, 58
Tintypes, 41, 504
To the photographers of America, 196, 242
Toning bromide prints, 150, 238
platinotype, 204
some notes on, 516
Trade printer wanted, 493
Transferring clouds from one negative to another, 41
Transparencies, colored, by absorption, 382
Treatment of the customer, 1
of the figure, 401

VALUE of a library, 190
Varnish, crystal, 265
negative, 208, 264
Velox for the professional, 411
Ventilation, 254
Views abroad and across, 353
Vignette, the, 436

WANTED, a trade printer, 493
War pictures, 159
Warm climates, photography in, 333
Washing of prints, 331
Waste, 378
What the judges thought of the Exhibition, 374
When something goes wrong, 187
Who will win them, 213
Window, the photographer's, 468
Workroom methods, 423
Works of art: how to see and enjoy them, 371

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THE TREATMENT OF THE CUSTOMER. By F. Bennett 1
THE REMOVAL OF HYPO AFTER FIXING. By Chapman Jones 4
AN ERA IN ART—AND ITS CLOSING 7
SLOW vs. RAPID PLATES FOR LANDSCAPES. By Capt. Abney 9
SPOTTING NEGATIVES 11
REPRODUCTION AS A MEANS OF IMPROVING NEGATIVES. By John A. Hodges 12
ABOUT MOUNTS AND MOUNTING 14
PRACTICAL NOTES 16
LETTERS TO JACK—THINGS OLD AND NEW 17
AN "AMATEUR" LESSON TO THE PHOTOGRAPHER 18
ABOUT THE CARBON PICTURE 20
HOW "OUR PICTURE" WAS MADE 21
LIGHTING IN PORTRAITURE. By F. B. Simpson 23
THE CHOICE OF A HAND-CAMERA 24
PAPERS FOR PROFESSIONAL PHOTOGRAPHERS. By John A. Tennant. . 26
LIGHTING IN COMMERCIAL PHOTOGRAPHY. By T. N. Armstrong . . . 29
DALLMEYER ON TELEPHOTOGRAPHY 32
TEACHINGS OF THE DAGUERREOTYPE. By Major-Gen. J. Waterhouse, I.S.C. 34
TRANSFERRING CLOUDS FROM ONE NEGATIVE TO ANOTHER 41
PHOTOGRAPHERS' ASSOCIATIONS. By W. H. Potter 43
AMMONIUM PERSULPHATE. By H. Scott Lauder 44

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PORTRAIT

By C. C. Kough, Greensburg, Pa.

Print on Special Rough Velox Paper

WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

VOL. XXXVII. JANUARY, 1900. No. 517.

THE TREATMENT OF THE CUSTOMER.

BY F. BENNETT.

HAVE you ever been visited by someone who knew someone who made lovely photographs? He or she will tell you of the altogether delightful work done by this friend until you feel that you are very small indeed. I do not object to the amateur—and I could not mend matters if I did—but I do not forget that I am a professional man who is making a living by the practice of his art. For the unfortunate photographer who considers it necessary to undertake business at rates reminding one of a Dutch auction I have more pity than sympathy.

One of my best customers called on me some months ago accompanied by a younger lady friend. The new arrival was an amateur photographer and wished to photograph her friend—my old customer—in my studio. She would do the posing and exposing and I could "do the rest." The exposures were duly made, on my plates, in my camera, and everyone was satisfied. Then I asked to be allowed to myself make a few attempts. After my visitors had gone I duly developed the negatives; then came the diplomacy. From all the amateur attempts I made prints. The light was crude, and the results gave heavy shadows and a look of antiquity—a sort of grandmother look. From my own negatives I selected the two best, and did a little—just a little—of retouching. If ever I did good retouching it was on those two negatives. When the proofs were submitted I knew that I had won the day. I have no doubt that the amateur work caused a spasm, but I never heard of it again. But I do know that I got a very satisfactory order from my own negatives.

I have more than once been asked to supply retouched negatives in order that my customers may do their own printing. I make it a rule that all negatives remain in my possession, and invariably refuse such requests. I cannot blame people for asking this, as some of us have to consider every dollar we spend, but I decided to take this stand and have continued it. If you do take negatives in this way, get a good price for them. If you sell prints at $4 a dozen, a negative is cheap at the price of a dozen prints. If you sell prints at $10 a dozen a negative is too valuable to sell. Just here let me digress a moment to protest against the mistake of fearing the "other man." Too often we will work cheap to secure some little order. It is very doubtful business, and generally wrong. And now for a case where I did what I have just been objecting to. A wealthy but bargain-loving lady came to me for a seventeen by twenty-two enlargement. She was very particular in inquiring the price, which was $12 for one print on Aristo-platino. But this she scouted as absurd, and announced that she had seen enlargements offered for $2. I at last agreed to her terms, and she was to call in ten days. I made the enlargement—a bromide—and I did not waste any time over it. It came out somewhat hard as to shadows, and decidedly chalky in the whites, but then what can you expect for $2. At the same time I made an Aristo-platino; and I made a beauty, one fit to be hung at the convention. The appointed day came, and with it the lady. Her enlargement awaited her on an easel, and I had not subdued the light. I let her wait a moment with her effigy before

going down to the reception-room. There was trouble then; almost tears, and much indignation. But I stood my ground boldly, and maintained that it was good $2 work. After some argument I suggested that of course the print was open to improvement, for instance—and I pulled some narrow strips of gummed paper from my pocket. A few of these I placed carefully over the heaviest shadows—I had studied it all before—and at once the picture looked better. Then I opened the attack. I had taken the liberty of making an enlargement to suit *my* ideas of the value of the subject, having seen in it an attractive possibility for my show-case. The lady was all curiosity at once, and nothing would suit but that I at once show this work. So I led to where it was placed, in a neat black and gold frame and tastefully draped. What a contrast! The Aristo-platino was just too charming, and she must have it. Would I sell it to her for $5. No! But it would be of no use to me, and it was made now. I smiled. As a show picture it would be of use to me, and after its day was past I would destroy it. Now here was where I held the trump card; I was quite ready to lose the sale, though I hoped to be successful. And successful I was. I demanded $15 or with frame $25, and after a long haggle on her part—for I simply remained firm—in an endeavor to get picture and frame for $20, she took the picture only and paid my price. I could not have worked such a scheme with most people; but I study my sitters.

THE PERMANENCY OF THE NEGATIVE.

SOME months ago we referred to the fact that a number of valuable scientific negatives, in the care of a British Government institution, had been in most part hopelessly ruined by sheer carelessness of storage. Dampness was the factor mainly responsible for the trouble.

The work of mapping the sky has for years been the work of many of the ablest astronomers, and the value of their work depends almost absolutely on the permanence of the results. The comparative value of such charts, as recorded at different periods of time, can scarcely be over-estimated. Such a consideration as the obvious ruining of negatives by careless storage can easily be guarded against by care. But the more subtle changes of a considerable period of time are more dangerous, being less expected and less likely to be prevented by the ordinary amount of care which would be bestowed on a negative of less value. It is said that in many stellar negatives signs of change have manifested themselves after the lapse of years, the fainter stars vanishing altogether.

A faint star on a negative is a delicate impress, and it is easy to conceive that a very slight action in a film might suffice, in lapse of time, to obliterate it. The need, therefore, for care is very great, and emphasizes the fact that the value of photography so often depends on thoroughness in *every* detail.

There is no essential difference between star negatives and the negatives of everyday professional work. Dry plates are used in each case, and there are many samples of professional negative making, turned out forty years ago, which have lost none of their original delicacy—and the collodion of then offered greater facilities for changing than the gelatine of to-day.

Fortunately, there is every reason to believe that there is no insurmountable difficulty in sufficiently protecting negatives, and the destruction of negatives not carefully handled is so obvious that it is known to everyone.

The simplest way of protecting a film from what may be termed chemical injury is, fortunately, the best way. We refer to varnishing. No negative which has to be kept should be put by without first being varnished. An unprotected negative in an ordinary room is almost sure to deteriorate, and even if every care is taken—except the first simple obvious care—change will take place gradually.

Gelatine is not an inert surface. It is slightly susceptible to moisture, as every photographer knows. The alternate dryness or humidity of the air, therefore, will dampen or dry the surface of the film, and when the film is dampened it is too much to hope that the moisture in the air is chemically pure. There is, therefore, a steady though infinitesimal deposit of mat-

ter in the gelatine, just as we are taught that there is in the air we breathe. This may be innocuous or it may be hurtful, and should certainly be guarded against by varnishing.

To successfully guard against external agencies is useless if the film itself is not beyond suspicion. Here, too, the matter is, fortunately, well within our control, and the ordinary care which any photographer is able to use should prove sufficient.

The simple matter of fixing is one about which people like to differ; but it may be said that it is not always safe to consider fixation complete the moment the cloudiness is gone and the negative clear. Fading of negatives is often traceable to this, coupled with insufficient washing afterward. Therefore, be sure that the last trace of unused silver is dissolved out. Then the hypo itself must be thoroughly washed out, or, in conjunction with the silver which it has dissolved, it will work havoc. Lastly, the question of the water itself should be considered. At least the final washing should be in distilled water.

In registering the subtle light of faint stars we are on a field of great delicacy and exactitude, and should use corresponding care. An equal care should be taken with all negatives that possess an intrinsic beauty of their own. Occasionally a negative is produced which is worthy to live, irrespective of the personality of the person portrayed or the craftsman who created the work. Perhaps it is impossible for us to decide if any special photograph will live, as live some of the old engravings; but certain it is, we think, that work worthy has been produced, perhaps more than once.

TO REVERSE NEGATIVES.

To those who only occasionally need one, the obtaining of a reversed negative is sometimes troublesome and uncertain. To obtain it by first making a positive is troublesome and takes time, and, in addition, the quality of a negative obtained by repeated copying is not improved, and the loss is sometimes considerable.

The investigations which have been made with ammonium persulphate promise an easier method than any previously employed, and as the procedure is in no way different from that used in some other work by photographers there are no initial manipulations to be learned. The process, too, is partly workable in daylight, and this is, to say the least, an advantage. The negative should be placed in a printing frame with an unexposed plate behind it. The plate should, preferably, be a rather thinly coated one, and the exposure should be full, rather than under-exposed, though over-exposure must be guarded against. The plate must be fully developed with some developer which has no tendency to veil the deepest shadows. Develop until the deepest shadows—for this is a positive—appear black through the back of the plate. Of course, the film will by this time be darkened all over, unless there is a general veiling, probably caused by too much alkali. When the plate has been washed to get rid of the developer it should be placed in a 5 per cent. solution of ammonium persulphate until the whole of the developed image and any partially dissolved silver is dissolved out. The partly dissolved silver appears as a faint brown stain, and must be thoroughly eliminated. A deposit of silver sulphate is left in the image, and this may be removed by sodium sulphite, but, as it has a solvent effect upon silver bromide, the strength of the bath must be regulated by the appearance of the negative image. Should the shadows be sufficiently clear, a 2½ per cent. solution of the sodium sulphite will remove the silver sulphate after a brief immersion without perceptibly affecting the silver bromide. If the shadows are much veiled, the strength of the sodium sulphite solution may be increased to 5 per cent., and the treatment prolonged to advantage. This clearing and the subsequent work may be done in daylight. When the plate is thoroughly freed from the sodium sulphite it should be well washed and then developed with the original developing solution. Development must be full, and after development again fix in hypo.

This method of reversing a negative from left to right hand, by reversing a positive

to a negative may prove a useful help to the photographer after it is more fully understood by further experimentation. It will, of course, be possible by its use to take direct positives in the camera, and in many cases it will prove a further aid to the photographer. The method is worthy of a careful trial.

THE REMOVAL OF HYPO AFTER FIXING.

BY CHAPMAN JONES.

THE getting rid of sodium hyposulphite after fixing prints, either more quickly or more thoroughly than is possible by the simple use of water, has exercised the minds of photographers for the last fifty years. Hypo and fading used to be closely associated together, and not without reason, and in the early days of photography the fading of prints was regarded as an unmitigated misfortune. We have lived to see fading regarded as an advantage, so far is it possible to go back from the enthusiasm of desire for the welfare of photography. But we have also lived to see the fight against fading entirely successful in the mastery that we have over the platinum and carbon processes. But even if we eschew silver prints, sodium thiosulphate must be used for fixing negatives, and the getting rid of it after it has done its work is a problem that is likely to remain with us.

The first recorded attempt that I know of to complete its removal was by Sir W. J. Newton, who, in 1855, said that he had used a solution of alum for this purpose. Alum is still used, though for negatives more than for prints, and for some purposes remains the best reagent for the purpose.

When the thiosulphate is decomposed its products of decomposition remain, instead of the original salt. These products may not be equally harmful in all cases, and, therefore, it is not possible to determine absolutely the comparative values of various reagents. That which is best for a silver print that has only to be preserved may not be the best for a negative that may require intensification. In the latter case the aim will probably be to prevent the formation of a precipitate with mercuric chloride, and a reagent that produces compounds that precipitate the mercury salt is useless. But if these compounds are without effect on a silver print, the same reagent that is useless for negatives may be effective for prints. An essential property of any reagent that is to be used with confidence is that it shall not attack the image itself, and this is a matter that has been too much overlooked.

Sodium hypochlorite was suggested in 1864 by Mr. F. W. Hart, and he has since advocated its use. This has the advantage of completely oxidizing the remaining thiosulphate to the harmless sulphate, but it is so vigorous a reagent that it readily attacks the image, either in prints or negatives. To guard against this disaster, a very weak solution was used, and the washing liquid was tested by means of the blue "iodide of starch." If the blue was discharged by it the print was treated to another weak bath of the hypochlorite, otherwise the hyposulphite was completely oxidized. The silver chloride of sulphate remaining from the silver thiosulphate was removed by washing once with weak ammonia, The chief drawback to this method is that the image itself must be more or less attacked.

In 1866 Dr. Angus Smith proposed the use of hydrogen peroxide for removing by oxidation the last traces of hyposulphite. He remarks, however, that the peroxide slowly bleaches a print, and, therefore, the solution must be used "extremely weak." This, therefore, is a grave objection to its use. He says that it seems that the thiosulphate is completely and instantly converted into sulphate, but in this he was very much mistaken, and I do not know that this error has ever been pointed out, except a few years ago by myself in these columns. The fact is that the peroxide acts at once on the thiosulphate, but that only about one-third of it is changed to sulphate, and even after many days less than one-half of the sulphur present will be found to have been oxidized to sulphate. The other two-thirds of the thiosulphate appear as tetrathionate. Now tetrathionate gives a precipitate with mercuric chloride, so that hydrogen peroxide is use-

less as a hypo eliminator for negatives that are to be intensified by means of mercury.

In 1872 Dr. Vogel suggested a weak solution of iodine for oxidizing the last traces of the thiosulphate. This, of course, converts the thiosulphate completely into tetrathionate, so that it is about as good as peroxide of hydrogen in this matter, but it is far superior in the stability of its solution. While hydrogen peroxide deteriorates rapidly without any show of change, the approximate strength of a solution of iodine is at once evident by its color. It is possible, therefore, to watch the exhaustion of the iodine solution, and this cannot be done with either sodium hypochlorite, or peroxide of hydrogen. In treating prints, too, the iodine will color the paper blue when it has oxidized all the thiosulphate in its immediate vicinity.

Iodine obviously is of no use for negatives. We have often been told that it is useless for prints—that the product of its action on the thiosulphate—that is, the tetrathionate—is as injurious as the thiosulphate itself. But this statement, I fear, is not founded on fact, and my own experience contradicts it. Twelve years ago I prepared some silver prints on albumenized paper, and, after fixing, rinsed once only, put them into weak iodine solution until the paper back was blued, then into water containing a very little potassium nitrate, to remove the blue color, rinse again, and dried. The rinsings were simple rinsings, not soakings. A print so treated now shows hardly any, if any, indication of fading, while other prints treated similarly, but without the iodine, changed in a few months, and now are quite yellow. These prints were kept together in a portfolio.

Iodine, like the other two reagents, attacks the image itself, and Dr. Vogel, in recommending it, is careful to say that if the manipulations are carried out rapidly, the picture is not affected.

The reagents already mentioned have been rediscovered as hypo eliminators by various persons from time to time. Chrome alum has been suggested instead of common alum, chloride of lime instead of sodium hypochlorite, and other such substitutions have been proposed that any school-boy might suggest after a few weeks' study of chemistry.

In 1895 potassium persulphate was introduced as a hypo eliminator for both negatives and prints. The alkaline persulphates, like the other reagents, except alum, attack the image itself. Indeed, so readily do they do this, that ammonium persulphate is chiefly known as a reducer of density. Whatever their action upon the thiosulphates may be, they have practically no action in preventing the formation of a precipitate by the addition of mercuric chloride. This indicates that the product is probably largely or entirely tetrathionates. I do not see that the persulphates have any advantage over the other reagents, except that they can be kept in the solid form more conveniently than iodine, and when in the solid form they are more stable than solutions of hydrogen peroxide or sodium hypochlorite.

It seems that every reagent so far proposed that will oxidize the remaining traces of thiosulphate is able to attack the image also. Alum solution, either by itself or slightly acidified, or very weak acid without alum, will destroy thiosulphates, and the products of the action give no precipitate with mercuric chloride or silver nitrate.

Alum or acidified alum is, therefore, far superior to either iodine, peroxide of hydrogen, or the persulphates, as a bath for negatives after washing them, to ensure the removal as far as possible of substances likely to interfere with the clean action of mercury or silver salts upon the image.

As to the getting rid of hypo from prints, I doubt whether any treatment will confer more permanency than a good washing with plain water. But the washing must be thorough, and not of a few minutes' duration only. If certainly permanent prints are wanted, of course either the platinum or the carbon process will be employed. But if silver prints, especially large ones, are wanted quickly, or if water is scarce, the use of "eliminators" is worth attention, and especially iodine. Prints may by their means be finished and dried or mounted within half an hour of their removal from the fixing bath.—*Photography.*

OUR *Five Dollar Combination*, offering the MAGAZINE for 1900, *Mosaics, 1900*, and *How to Enjoy Pictures*, post free to any address, has had a lively boom during the past few weeks. The photographer owning these helps will find them a most profitable investment.

A SAFE DARK-ROOM LIGHT.

THE value of a safe light in the dark-room is more self-evident than considered. We are very much inclined to go for the safe side by working with too little light—in fact, I have known a photographer examine a plate by the glow of his cigar. He had by long usage to his studio done away with any need for careful watching of his plate, and if it proved a little unsatisfactory in the result, why there was intensification or reduction, or a re-sitting.

Working with a feeble light is very bad economy, and it is as unnecessary as it is bad, for it is not the quantity but the quality of the light which is the determining factor.

For different plates a slightly different light may be the best. The testing of a light for safety is easy, and should be done whenever a new light is arranged, or from time to time if a paper tissue is used. Place an unexposed plate in the dark-slide, and then drawing the slide sufficient to uncover one-quarter of the plate, expose this to the light for two minutes. Then draw the slide half out and expose for two minutes more. Then draw the slide three-quarters out and expose for three minutes. One-quarter of the slide has now been exposed for seven minutes, the next for four minutes, and the next for three minutes, and the last quarter and the rebate of the frame have been unexposed. Now place this in the development dish and give it a full development, turning your light so low that it cannot affect the result, or extinguish it altogether. Rinse the plate and place it in the hypo bath. When it is thoroughly fixed examine it by daylight, looking at a sheet of white paper through the negative. If the whole glass is absolutely clear the light is safe. If the rebate and the unexposed part of the plate are clear we may be sure that the plate is all right; but if these are fogged we may be sure that it is not the fault of the light. If there is a difference between any of the divisions of the plate you may feel that the light is unsafe. It may be that the light is safe up to three minutes, but that a longer exposure is unsafe. A light that is actinically safe may be apparently as strong as a clear gas jet. When dry-plates were first brought into general use some twenty years ago we used a room lighted by a large window covered with a single thickness of canary-yellow paper. The light was almost like daylight, and a newspaper could be comfortably read by it. In using daylight through a closed medium a test should be made from time to time, as the daylight fades the medium.

It is sometimes necessary—it is always convenient—to be able to change an ordinary room into a temporary dark-room. Valentine Blanchard, writing some time ago on this subject, suggested getting some broad ogee moulding, which can be chosen so that if placed with its faces together the moulded sides fit exactly into each other. He thus describes his process:

"Of course, light cannot travel around corners, and the different members of the moulding fitted exactly into each other. I bought a cheap mitreing block and commenced operations, and then a grand inspiration came. When the two lengths of moulding were placed together as described above they made practically a square again, for the curves were concealed within. It occurred to me that if I cut the mitres through the two pieces at one operation I should at the same moment of time be making an inner and outer frame which must perforce fit into each other. When all the four sides were thus cut, two at a time, I proceeded to test the experiment, and was delighted to find when I separated them into two lots, and then laid out the outer ones, or those with the bevel running inward, on a flat surface, the other four pieces with the bevel running inward exactly fitted, and thus made the inner frame. Satisfied with this result, I proceeded to glue up the inner frame first. I did not risk gluing up the outer frame, but fitted it piece by piece, as it had to be nailed into position over the ordinary window. To make quite sure I nailed the bottom piece first, and then with the inner frame as the gauge I brought one of the sides into position, and when the grooves exactly corresponded nailed it. The next side followed in like manner, and so on to the end, the top being fixed last. The two frames fitted into each other like a lady's hand in her glove. I did not use glue for the outer frame, but trusted to the help of

putty, that great benefactor to the hedge-row carpenter. Of course, thick brown paper and glue had to be employed to stop out stray light around the outer frame, but that was all easy work. I took care to glue the ruby medium on the inner frame before I commenced the adjustment of the two frames, for it would not have been at all easy to properly stretch it when fixed in position.

"There are plenty of photographers, both professional as well as amateur, who need a dark-room occasionally, but who cannot spare a room entirely for this purpose. By the plan adopted above a room which may generally be in use for ordinary purposes can in an instant become a dark-room by simply fixing an inner window as light as a feather, but quite as efficient for photographic operations as an ordinary one of glass. It is difficult without diagrams sometimes to make a description clear. If the above is not quite lucid the reader has simply to get two pieces of ogee moulding and bring the curved surfaces face to face, so that the curves fit into each other. When separate each piece has a thick and thin edge, but when fitted together as above described the thin edge of one comes against the thick edge of the other, and so on *vice versa*, so that when two frames are made by the method described above the outer one has a thick outer edge, but the inner one is the exact reverse, with the thick edge on the inner side."

The movable part of the frame can either be permanently hinged and turned back against the wall when not in use, or it may be entirely loose and held in position, when required, by buttons.

AN ERA IN ART—AND ITS CLOSING.

We were not a little startled a few weeks ago to receive the following invitation:

"MR. LOUIS PRANG

has the honor to invite you and your friends to a Private View of his

COLLECTION OF PAINTINGS

and Original Prize Christmas Card Designs by Elihu Vedder, Will H. Low, I. M. Gaugengigl, Thomas Moran and others, at Copley Hall (Boston), Wednesday evening, November the twenty-second, eighteen hundred and ninety-nine, from seven until ten o'clock."

"Startled," we say, because we could read between the lines that an old friend who had for half a century been the public's friend, and who had created an era in American art, was probably about to end his great work and try to secure a home for his pets where they could receive longer care than he could give them. We were correct in our conjecture, as another card informed us that after the exhibition Mr. Prang's art collection was to be sold at auction, as by this time it has been.

The issuing of the invitation alluded to above created considerable excitement in Boston, and for a time the local newspapers devoted considerable space to biographies of Mr. Prang and the testimony of some artistic friends who had much reason to remember him and never forget him.

It was in 1865 that we first made the personal acquaintance of Mr. Prang, since when we have been familiar with his work and one of his devoted admirers.

It behooves us then to devote a little space to some excerpts from the newspaper articles we have mentioned, with our hearty indorsement of the words of praise and commendation.

Mr. Prang was also an intimate friend of our old coworker, Dr. Hermann Vogel, and also a sincere friend of Photography. But let us refer to the notes.

The *Journal* says:

"The keynote of this man's great success in his chosen profession is the same old keynote which has rung through history wherever success has been attained—work! hard work! As he said himself to the writer the other day:

"'Whatever success I have achieved is due altogether to hard and consistent work and a constant endeavor to improve on what I had already done.'

"But behind this ability to work there was much more—there was a broad and comprehensive intelligence, a sympathetic nature, and a sort of intuitiveness which ever seemed to ring true to the best instincts of the people at large, especially

in his attempts to be a guide and educator.

"There is one word in our language which he invented or coined—the word 'chromo'—which, when carefully considered in the history and development of art and art education in this country, will be found to stand for much. The chromo of forty years ago, which Prang issued to a world that was starving for a bit of color decoration in the home, was a revelation at the time, and many of them are treasured to-day in the old homes throughout the country as heirlooms which will ere long be sought after by collectors as historical art treasures.

. . . . . .

"One of the merchant princes of Boston recently said that it had become absolutely necessary for the great stores to keep some sort of pace in the interior fittings and decorations of their stores with the improved growth of art feeling in the community. 'All that was formerly necessary,' he said, 'was a counter for your goods and a roof for shelter. Now all that has changed, because there is a great change in the people.'

"It probably will never be known how much Prang has contributed to this great change, but to those who have been familiar with his work it is known that it is no inconsiderable share.

"Prang had the artistic temperament, and he clearly saw that America was a great field, but one which was very barren of anything like artistic spirit at the time. The attitude of the people toward things artistic was one of the utmost unconcern, and only a strong man would dare to venture beyond what was called 'public taste.'

"At that time a word was current which has since gone very largely out of use—the word 'tasty.' In an unconscious way, this was probably derived from that other thing called 'public taste.' A thing was either 'tasty' or it wasn't. In a vague sort of way it meant that a thing was 'artistic,' but the latter word had no particular meaning at that time. That came later, but came through the influence of Louis Prang, whose Christmas cards were first regarded as 'tasty,' and, later, when they got entirely out of the 'tasty' class, somebody discovered that they were 'artistic,' and so it came to pass that people discovered the difference between things 'tasty' and things 'artistic.' That was a great day for American art."

The testimony of Mr. R. B. Gruelle, of Indianapolis, Ind., an artist whose career Mr. Prang had assisted in building up, is given in another Boston paper, viz.:

"All along this sometimes weary way this zealous diffuser of art has ever extended a helping hand to struggling genius. Many artists who have become factors in the world's betterment found their earliest and most material encouragement in him. It is safe to say that there is no one who is more generally loved and esteemed by artists the country over than Louis Prang. It can be readily seen what a factor he has been in the art development of our country, not alone by the wide-spread distribution of his skilful reproductions, but also by his unstinted patronage of artists of all classes.

. . . . . .

"Those who know Mr. Prang himself realize the fulness of his life as revealed in his personality. A life well spent in the earnest endeavor to bring works of art within the reach of the masses, so that the homes of the humblest might enjoy something of the beauty of the creations of art. In this Mr. Prang has indeed been a benefactor to his fellowmen and a factor in the world's betterment. Therefore, it is with great pleasure that I lay this tribute at the feet of one who, unconsciously, entered into and gave joy to my early life. I feel and believe that thousands of others feel and know that Mr. Louis Prang is one of the many great factors whose products are indeed living, vital realizations in the realms of the world beautiful."

These last words we heartily second as our own, for it is true that soon after we started this MAGAZINE and began our purpose to advocate and improve Photographic Art, Mr. Prang became our friend and patron, and, as Mr. Gruelle says, "gave joy to our early life."

The *Journal* further says:

"Mr. Prang, although past 75, has still the vigor and impulses of a much younger man, and his retirement does not seem to indicate that he intends to lead a life of leisure. His interest in the art education of the people as a whole will continue to call on him for more or less steady effort.

It is really the work he does for the schools, and which is more centred in the Prang Educational Company, that has grown out of the soil prepared by him through his earlier efforts and nourished in its growth through the financial result of those successful art publications of which we spoke before, that will henceforth claim his undivided attention.

"To give an account of what Mr. Louis Prang has done in this special direction of art education for the public schools of this country would require another column; enough that he has fostered in the past twenty-five years, first as an integral branch of his art publishing business, and since 1881 under the title of the Prang Educational Company, here in Boston, the most unique school publication business for art instruction as a specialty in the civilized world, to which the art educators of the old world even look up to with astonishment and admiration."

It will be a long time before another will rise among us to work and wait so patiently and persistently for art as has Louis Prang.

SLOW vs. RAPID PLATES FOR LANDSCAPES.

BY CAPT. ABNEY, IN "PHOTOGRAPHY."

THE other night at the Camera Club a question was raised whether slow or rapid plates gave the best gradation for landscape work. One experienced plate-maker, for whose opinion we have the greatest respect, maintained that a slow plate gave better gradation, whilst the writer maintained the reverse. Both sides had looked at it from a theoretical, or perhaps it would be better to say a sensitometer point of view; and whether the two parties were at cross-purposes or not is difficult to tell.

The writer maintains his opinion on the following grounds: If we place two plates —one a rapid and the other a slow plate— side by side and expose strips of the two together by means of a movable mask to an artificial light, the first exposure being, say, one second, the next two, the third four, and so on, till perhaps we have an exposure for the last one of eight minutes thirty-two seconds, and develop them, together by preference, we shall find, of course, that the slow plate will show a fewer number of strips with any appreciable deposit on it. We can, however, measure the opacities by any means we like, and we shall find that the differences in opacity of the successive strips are greater in the slow plate than in the rapid. The opacities of the most exposed strips in each may be different, and probably those of the rapid plate will be considerably less dense than that of the slow plate; but in each we shall probably find that there is one strip near the beginning which shows that the time has been too short for any deposit to be apparent.

Now, as the writer has often stated, the printing density of any negative is limited. We may take it that when one-fiftieth of the incident light is cut off by the opacity, that and bare glass are the limits that will print on a paper such as platinum. If, then, we take the number of strips between these values as found on the rapid and slow plates, we shall find that the number of intervening strips in the rapid plate between these values is larger than it is in the slow plate.

This means that a greater difference of exposure is rendered printable in the former than in the latter—that is to say, bigger differences in the lights of a landscape will be shown in a print by the former than by the latter.

It was explained by the opposition that an exposure might be given to a plate far exceeding the "correct" one with the slow plate, but not with the rapid, and with the former a negative would still be obtained which would give the same perfection of print as if the exposure had been correct. The "straight part" of the curve, which on Hurter and Driffield's plan is assumed to give the correct exposure, was stated to be the reason.

The writer states once again, as he often has before, that the exposure lying on that straight part is only a portion of that of use to the photographer, but that the part which indicates small exposures and

which is not in a straight line is equally useful.

What the photographer requires is bare glass to an opacity, cutting off, say, one-fiftieth of the light, and that is not obtainable on the straight part of Hurter and Driffield's curve (except in perhaps very rare plates). In any case the gradation is, from these experiments, far better in the rapid than in the slow plates, provided the above opacity is obtainable in the former, which is not always the case.

A striking instance is one that is afforded this year in the work of a distinguished amateur who photographed in the Alps for a good many seasons. Last year his snow views, with low-level foregrounds, were rather hard, and what they would have been had he not been an expert one can scarcely say. The contrasts were too harsh, and there was a want of detail in the highest lights and in the dark shadows. This year the prints are delicate and full of half-tone and detail throughout. The negatives in both years are really good negatives, but last year's are too dense. The amateur confessed that this year he had used much more rapid plates than last.

This experience is also the writer's on practical as well as theoretical grounds. But when using rapid plates care has to be taken that they will give sufficient density in the highest lights, which, as before stated, is not always the case. It may be remarked that if plate-makers would use sufficient iodine in the emulsions equal rapidity can be obtained, but with an increase in density. Plates made of pure bromide are apt to suffer in density-giving quality if their rapidity is pressed to a maximum. It is perhaps somewhat against the use of a rapid plate that latitude of exposure is a great deal more wanting in it than with a slow plate. It will not bear five or six times the correct exposure, for it is apt to begin to show reversal, and then the high lights become feeble and bad.

This, again, is specially the case with pure bromide, and is not so much the case when iodide is present, even in small proportions. For hand exposures a very quick plate is difficult to use for reasons which are quite apparent.

An exposure of a duration much less than a quarter of a second is difficult to give by hand, and if the proper exposure with $f/16$ for a view with such a plate is one-fiftieth of a second, to increase the exposure to a quarter of a second means diminishing a stop to nearly $f/60$, which is the limit to which a stop should be taken if diffraction phenomena are to be avoided. A plate which with $f/16$ requires one-tenth of a second is still a rapid plate under the same conditions of lighting, and here the stop need not be reduced beyond $f/32$ to bring the plate into the category of those which are suitable for hand exposure.

But why use the hand at all? The stand camera can have a shutter attached just as well as can a hand camera, and one photographer we know, who is also a celebrated painter, realizes this, and hence gives shutter exposures; most of his productions are of rare beauty and full of delicacy, and he always uses a brand of rapid plates.

When copying a map or a plan the slowest plate obtainable is to be recommended, for the very reason that it gives great contrast in rendering black and white; but our advice to the landscape photographer is to use a quick brand, when once he is satisfied as to the sufficiency of their density-giving powers, in preference to all others.

When a variety of landscape is to be met with, and when gray sky and no sunshine illuminate the picture, the slow plate will be the better kind to employ; but with most it is an article of faith not to photograph under such conditions, though it is one of the favorite conditions which the painter likes. There is reason for this, as the painter has color to deal with and the photographer has not, and a cloudy day when color is to be depicted is more favorable for effects of color than when all is more or less deprived of hue by brilliant lighting. The difference between a high light illuminated by the sun and that merely by a gray sky is immense, whilst the shadows which are usually illuminated by the sky in both cases remain not far different. The rapid plate will therefore give a flatter picture with the gray sky illumination. The drift of these remarks will be seen to be that with hand cameras always use a rapid plate, and with stand cameras use them as a rule, but keep some slow plates for special purposes.

SPOTTING NEGATIVES.

To spot negatives well is one of those minor branches of work which it is supposed that anyone can do. Yet, there is a right and a wrong way in it, and unless one knows how to best go about it wasted time will result. Many people have their own pet coloring medium, but I do not think that any one color is best. It is more a matter of being used to your coloring. I have worked with vermilion color next to a man who was working with Prussian blue. I find that Chinese white, toned down with a little gray, is as good as anything. How to best use the brush is thus described by a writer: The brush should first of all be placed in water, after which as much of the fluid as possible should be removed from it by pressure against the sides of the water-holder. Then the point should be charged with color by moving it over the palette with a kind of rotary motion produced by the rolling of the brush handle between the fingers and thumb. In no case must the brush be pushed backward and forward on the palette, as that practice is very destructive to the hair. When sufficient color has thus been taken up the brush is carefully primed to a point, at the same time removing all superabundant color. It will be observed that only the tip of the brush contains the paint, while the body of the brush is filled with ordinary water, but only just sufficient to hold the hairs together. Be very careful that you keep your brush clean. Do not let any color cake on or clog it. The touching of the spot should be done by holding the brush almost perpendicular to the film, and just touching the centre of the spot and holding the brush there for a moment to let the color soak into the gelatine. For most small holes one touch of color will be enough. If there is a big hole put on one spot of color first and let that dry before putting on a second spot; and cover the hole with three or four spots. In very large patches float a wash of thin color on before commencing the spotting, and the stippling will then be easier. A great mistake in this work is too much haste. Go carefully and patiently to the centre of each pinhole and let the brush remain a moment, rather than try to rapidly dab in spot after spot. Not only will this way be better, but it will also prove quicker and save spotting on the finished print.

The first thing that strikes a beginner in photography is the fact that pinholes are much more apparent in the negative than in the finished print. A pinhole is clear glass in the negative and a dark spot in the print, and, therefore, more prominent. Then, too, we examine a negative by holding it to the light, and so get a much greater intensity of illumination than when we see the reflected light from the finished print. The light coming through a negative causes a certain amount of halation to the eye, and the edges of the holes spread and make them much more prominent than the black spot in the print.

The point of this is that if we use too strong a light we do much unnecessary spotting. We must not, however, go to the other extreme and use the light too weak. The best strength of light will be that which allows the negative to appear no brighter than the print when seen by good daylight; but experience built upon actual practice will be the best guide in this matter, and will enable the spotter to become almost independent of a regular and constant strength of illumination.

With a fairly good light the spots should be removed in such a way as to be invisible when examined from about eighteen inches distance from the negative. This, of course, does not apply to the larger pinholes. No notice should be taken of the appearance of the spotting when the negative is held up to the sky, as, although they may print correctly, they will appear not to have been touched when examined with a strong direct light. This apparent transparency is due to the relatively stronger light as seen by transmission, and should be borne in mind, as many young spotters make their spotting too heavy, through fear of not making it heavy enough. The correct way of spotting is easy to learn, and after that it is entirely a matter of care, patience, and gaining experience.

REPRODUCTION AS A MEANS OF IMPROVING NEGATIVES.

SOFT NEGATIVES FROM HARD ONES.

BY JOHN A. HODGES.

MANY amateur and professional photographers have, no doubt, occasionally produced a negative which, though otherwise good, by a slight oversight in development or exposure or in both, just failed to give in the print the precise effect which had been aimed at. The particular kind of failure we have in mind, and for which we presently intend to suggest a remedy, is not of that glaring type indicated by false tonality of an exaggerated kind, by patches of undue density and heavy non-luminous shadows, but that partial failure evidenced in one direction by a general lowness of tone, and in the other by a suspicion of over-brilliance or excess of contrast.

Negatives which produce results of the former kind usually require a considerable degree of skill and practice in the technical details of dodging and faking in order to produce the desired printing qualities; but for the two last-mentioned types a more simple, but perfectly efficacious treatment, well within the scope of the average worker, can be with advantage adopted.

Many and many such a negative has probably been thrown away and consigned to the dust heap, which, had its producer possessed the requisite knowledge, might easily have been converted into a perfect printing cliché, capable of affording the most charmingly pictorial results. . .

The particular method of improvement to which we now desire to draw attention is by means of reproducing, or copying the original faulty negative, with the object in the carrying out of the process of so modifying or altering its character as to render it capable of giving a print more in accord with the sentiment or idea originally intended to be conveyed.

The procedure is by no means difficult, and is well within the capabilities of even those who may not have acquired a very large degree of manipulative skill. We trust that this statement, and the fully detailed description which we intend to give, will, to a great extent, if not completely, remove certain difficulties which have recently been suggested by several correspondents.

Reproduction is equally successful in dealing with over-dense, hard negatives, as with very thin, soft ones, and, given due care, the reproduced negative may be caused to exhibit qualities the very antithesis of the original.

As the procedure when dealing with either of these two types of negatives will obviously be very different, we propose to deal with each separately. We will suppose, therefore, in the first place, that the negative which it is sought to improve is a very hard, over-dense one, and that a thinner and better printing negative is desired.

What we have first to do is to make a transparency from our hard original negative, using every possible means of minimizing its defects, and then from that positive we obtain our reproduced negative, either by contact printing or copying.

If the reproduced negative is to be of the same size as the original, we may adopt the contact method of printing for making both transparency and reproduced negative; but if a large camera, or one capable of sufficient extension, be at hand, it will be found far more satisfactory to copy in the camera. What we have to say about procedure will, however, be equally applicable in either case.

It goes without saying that the measure of the improvement which we may effect will, to a very large extent, depend upon the character of the transparency. Without taking some precautions, and merely proceeding in the ordinary way, we should probably produce a transparency possessing all the undesirable attributes of the negative, the faults of which we are endeavoring to correct. For transparency work special transparency plates are generally employed; but we should make a bad start by selecting one for this particular purpose. Transparency plates are slow, and slow plates tend to the production of density; therefore, in this instance we prefer to use

a moderately rapid ordinary negative plate, and we are careful to select one that is not prone to give over-dense negatives. There are several of this type—those issued specially for portraiture will be extremely suitable.

More care in exposure will, of course, be needed when using a rapid negative plate than if a special transparency plate were used, but there is no practical difficulty in the matter. It will be an easy matter to over-expose and ruin several plates if we follow the same plan that we should adopt with the lantern plate, of giving so many seconds at a foot from a gas jet. But a weaker illuminant will be well under control, and for the present purpose an ordinary composite candle, placed about four feet from the negative, will afford ample illumination. The actual duration of exposure cannot, of course, be given, so much depending upon the density of the negative and the speed of the plate; but it must be sufficiently full to permit of a well-restrained developer bringing out every detail before the transparency has had time to become dense. We aim, in short, at producing a thin transparency, full of detail, and slightly less dense than a good lantern slide.

Now some developers will yield this result much more readily and easily than others, therefore it is necessary to use judgment and discretion in making a choice. Pyro and hydroquinone, or hydroquinone and metol, are unsuitable, because of their tendency to produce density. An expert, or one quite familiar with their use, could no doubt succeed in producing the kind of transparency desired. We are, however, not advising the experienced, but those who are desirous of learning. We say, then, deliberately, eschew both pyro and hydroquinone and look around for a developer whose characteristic is to produce a thin, delicate type of image. There are two in particular which fulfil this condition —amidol and rodinal. Of the two, we give preference to the former, though if the reader happen to be more familiar with the working of rodinal, let him by all means employ it. The following is a suitable formula:

Distilled Water . . .	40 ounces.
Sulphite of Soda . . .	1 ounce.
Citric Acid	20 grains.

To each ounce of the above stock solution add four grains of dry amidol and twenty minims of a 10 per cent. solution of bromide of potassium. Some plates give density more easily than others with this developer, and it may be necessary to increase the quantity of amidol in some cases, or to reduce it in others. Amidol behaves somewhat differently to most other developers; the image usually appears very quickly, and every detail is visible at once. This must not be taken as indicative of over-exposure; it is characteristic of the developer, and development must be allowed to proceed until the right amount of density has been attained, for were the plate removed directly the image was fully out, a mere ghost of a transparency would be the result. It is this quality that makes amidol so valuable for our purpose, for however dense and violent in contrast the original negative may be, we shall, by carefully following the procedure laid down, and by arresting development at the right moment, be able to obtain just the kind of transparency we want.

When our transparency is finished, *i. e.*, fixed, washed, and dried, it will be well to make a trial negative from it, either by contact or in the camera. Here, again, if the original negative was so very dense and hard that the positive still shows some signs of those defects, despite all our care to reduce or overcome them, it may be desirable to work upon the same lines in printing the reproduced negative that we followed in making the transparency—that is to say, in the choice of plate, developer, etc. The appearance of the reproduced negative when finished, however, must be the guide as to the exact details of procedure, and if this should appear to lack sufficient contrast or strength, a different plate, one giving greater density, must be employed, and a pyro developer used in lieu of amidol.

In the event of the contrast being still too violent and harsh, the procedure which we introduced some years back, and which is extremely valuable in such cases, may be adopted, of intensifying the positive by the uranium method, and after slightly washing, allowing it to dry. Then the yellow color produced by intensification, which greatly adds to the printing value of the shadows of the positive, is discharged from the high lights by carefully painting them with a sable brush dipped in

a dilute (5 per cent.) solution of ammonia. The method is by no means a difficult one to apply, but success depends upon the care bestowed upon the work. If carefully done, the negative reproduced from a transparency so treated will be a very marked improvement upon the original.—*Amateur Photographer* (*London*).

ABOUT MOUNTS AND MOUNTING.

A FEW stray notes about the support which we give to our finished print may perhaps include one or two hints which will be new to many photographers.

Mounts, like everything else in connection with photography, are subject to the cycle change of fashion. At one time no one would have dared to think of any change from the conventional carte and cabinet. Their monopoly has gone, and now, thanks to the A. M. Collins Mfg. Co., Willis & Clements, and others, we may let our fancy have free play in choosing a mount to suit our picture. I wonder how many of the younger photographers ever heard of the "gold bronze" scare in the early eighties. To print or emboss a name on the card, in pure gold, was then far more universal than now, and the ever-ready foreigner, in his laudable desire to do the cheap thing, conceived the natural idea of saving money by substituting bronze for gold. Now there is no inducement to adulterate gold, for gold leaf is sold by the hundred or thousand sheets of a standard size, and not by weight. The pure gold can be beaten to a sheet so much thinner than the adulterated can, that there is actually less gold in the pure sheet, on account of its greater thinness. Gold is applied to mounts by being stamped in with a heated die; the letters are impressed into the card, and when the die is removed the gold remains. Once away from pure gold many injurious chemicals were used, each, if possible, worse than the others. There were many formulæ used, and among some of their components may be mentioned mercury, sulphur, white oxide of tin, sal-ammoniac —enough to scare any photographer who had an inkling of their presence in his mounts. These compounds were used in the form of a dry powder, and the average printer managed to speck some of it over the face of the mount. The result of this was simple, and disastrous. Wherever a print came in contact with a speck of this metal a white spot was the result. Imitation gold has left the photographer, never, we hope, to return.

The first rebound from the cabinet mount with its gold bevelled edge was the "India tint mount," often with a plate-sunk centre, and for a cheaper class of trade the cream tinted card with an "Oxford" line in red ink, and with ornamental corners. The mounts of to-day are so varied in selection that the photographer has unlimited choice. The latest fashion of all is to mount a photograph on any scrap of paper which suits it. It may be on a sheet of vellum or on a paper bag from the grocer's. This plan is all right in the hands of its present devotees, but if it becomes a common fashion we may expect some "terrible examples." This exercise of individual taste needs much careful thought and restraint. George Davison well sums the matter:

"There is a gradual education of taste in mounting as there is in the more important departments of artistic study and cultivation. It is probable that the majority of photographers simply take up imitatively what happens to be the thing generally adopted by the more pushing and successful exhibitors among whom they mix, and so they are saved some trouble and many mistakes. But one who works his way by himself finds his discrimination, his taste, alter year by year in his choice of mounts and frames, just as in his selection of subjects and his treatment of them. It is by mistakes that he most surely learns to improve, and his blunders are stepping-stones (often painful to the exhibitor) to better things and to confidence in his own judgment. The man who takes his cue from every experiment that he meets may always waver and never satisfy himself or anybody else."

There is one very important question in connection with mounting—how much do we intend to mount? The old idea is to charge a picture by area, so much for a cabinet, so much for a panel. But grad-

ually we are awaking to a wider selection in the matter. If you are in the habit of trimming all your prints to one size just spend a quiet hour in studying whether this cannot be improved. Take a print and lay it flat on the table—under a sheet of glass if necessary—and cut two pieces of card to an L-shape. Each of these cards will represent two sides of a frame, and they can be moved over the picture showing an open of any size until the best size is found. J. C. S. Mummery, writing at a time when there was less choice of mounts than now, laid down some rules or suggestions which are worth consideration:

"If a photograph or drawing is to be framed as well as mounted, then the mount may with advantage partake more of the nature of a portion of the frame, and a cut-out mount may be used. This, of course, is coming just one step nearer close framing, and is perhaps unsuitable for some prints, such as very light or vignetted pictures.

"Supposing a print to be vignetted, the plain border which is to isolate the print is most naturally that sheet of paper or support upon which the print is formed, and into which it dies imperceptibly at all its margins. Failing this, the nearest approach to it is desirable. A cut-out mount, of course, has the very opposite effect, and therefore is unsuitable.

"In using cut-out mounts, simplicity of outline must never be tampered with. No cutting to fancy shapes can be tolerated under any circumstances, and only in very rare cases can the curved lines of the circle and ellipse be used with dignity.

"The cut-out mount generally being, as it were, part of the frame, must be treated with that, whether of wood or card. Separate decoration of its own, I think, cannot be considered allowable, although such may be, and constantly is, applied to the frame.

"Bearing upon this point, I have often noticed that a prominent figure in an oak gilded mount is more than a strong picture in color can stand. The frame, on the other hand, is open to any decoration which may be desired, provided always the object of the frame is never lost sight of, and bearing in mind that if the eye is in the slightest degree led from the picture to the frame or its decoration, it is defeating the object with which it is employed; consequently, up to this point, decoration is in keeping.

"In the selection of suitable mounts it is absolutely necessary to consider the pictures individually. It is of no use broadly saying, for instance, that a plate-sunk mount is suitable for a platinotype—doubtless, platinotype prints do, as a rule, look well upon such mounts—but if we wish to get the best out of our prints, whether platinum or otherwise, we must be prepared to consider the various factors which go to make up pleasing results.

"Roughly speaking, color-darkness or lightness, and texture are the three heads under which we may regard mounts (leaving, for the present moment, the matter of preparation). Now, each of these three points is only to be settled satisfactorily by the exercise of good taste; there are, and can be, no rules, and all we can do in discussing the matter is to consider the points where the good taste is best exercised.

"If, for instance, we take color—ours being, so far, monochrome productions—what is the color of our print? We may take and put the mount into harmony with the print, or we may make a contrast; probably to make a harmony is generally the safer and more pleasing, and if the print is quiet or tender in its color or feeling a harmony is essential. The stronger or bolder class of effects and large subjects may be brought into comparatively strong contrast.

"In designing mounts it is always desirable to avoid making the width of the mount equal to the width of the picture, and most mounts will be found to work best from very narrow up to two-thirds of the width; after that the division becomes too formal, until the mount becomes very considerably wider than the print. But mounts of such very great width generally tend to lessen the apparent size of the picture, besides bordering on affectation. A mount of exactly half the width of the picture suffers likewise from a too formal distribution of parts.

"If practicable, I think it best, and least conspicuous, to have the frame and mount equal in width at the sides and top, and it is customary to allow a little more mount at the bottom; but, if the

picture to be framed would lose its proportions, it may sometimes be desirable to give a little greater width at the ends or as required; this cannot, of course, be done with wooden mats or close framing. It is, however, I think, a desirable thing not to use mounts of greater width than is necessary. This is a matter of considerable importance in exhibitions of paintings, where, for obvious reasons, wide mounts are not encouraged. Works of large subject or of tolerable size are, as a rule, those which may, with good effect be framed close; but it is, of course, purely a matter of taste, and requires considerable care to produce good results."

PRACTICAL NOTES.

Lenses for Stereoscopic Work. In the choice of lenses for this purpose we sometimes want to know what amount of view will be included by this or that lens. This depends upon the focal length of the lenses. The following table gives the angles included in the usual two and seven-eighths inches slide:

A lens of	2½	in. focus	will include	an angle	of	60°
"	3	"	"	"	"	50°
"	3½	"	"	"	"	45°
"	4	"	"	"	"	40°
"	4½	"	"	"	"	35°
"	5	"	"	"	"	30°
"	5½	"	"	"	"	25°

This may not be absolutely correct, but is near enough for all practical purposes.—*Jex Bardwell, in Mosaics, 1900.*

The Gum Process. Though any well-sized, non-glazed, and not too rough surface paper will answer, I have coated with most satisfaction a heavy-weight linen ledger paper. The gum-arabic used is of the white variety, and is in the form of what is known as tears. That found in the pulverized form is apt to be a mixture of the yellow and white varieties, and to be otherwise undesirable. The pigments employed are water-color paints; if in powder form they may be weighed out into exact quantities, and so I deem the powder form the best. To grind the pigment a palette knife is generally recommended; but I prefer a mortar and pestle, the same doing service for pulverizing the gum-arabic previous to dissolving.

To coat the paper and to work out the image after partly dissolving away the soluble portions various brushes are used; a flat camel's-hair (so-called) plate duster, or a bear's-hair brush three or four inches wide, will be required for coating; a flat badger blender for blending the streaky work of the coating brush into an even surface; pencil brushes, some fine, some coarse, these latter for delicately starting or roughly stabbing the coating, as the case may require—a high light needing emphasis here, a shadow needing to be lightened there.—*Hy. Wenzel, in Mosaics, 1900.*

Printing from a Hard Negative. A dodge for printing from a negative with very dense high lights may be new to some. It has one disadvantage—it is somewhat slow—but if printing is done in the sun the result will be got without too much time. The dodge is suggested by a correspondent, who says: "Use simply a light print as a mask, which would allow the light to be transmitted in a graduated manner, most readily to those parts of the negative which were densest, and at the same time cover the thin portions. I found it was a complete remedy, and by varying the depth to which the mask was printed up, any desired result could be obtained."

The mask is prepared as follows: A piece of ordinary sensitized paper is exposed under the negative and printed up to the required depth to suit the particular negative. Say lightly for one in which there was not very excessive contrast, and pretty deeply for such as have the contrasts most marked. This is fixed, washed, and pasted on a piece of glass somewhat larger than the print. In order to use it it is laid on the front of the frame so that it is about a quarter of an inch from the negative, and the subject allowed to print in the usual way, but it may, with advantage, be used in direct sunlight. If the mask causes the high lights to print up more than they should do, it can be removed when they are nearly right, and the shadows then allowed to print up to the required depth.

PORTRAIT
By Boyé & Habernicht, San Francisco

LETTERS TO JACK—AND THINGS OLD AND NEW.

In 1895 and 1896, thereabouts, I held correspondence in these pages with a young worker in our art whose persistent queries gave me subject for a series of replies to him, which I termed "*Letters to Jack*," trying to make the pointers I gave him useful to my readers. Since then Jack has been "*trying to grow*" in Boston, where he has gained some reputation as an artist; and now he "wants to be *resuscitated* in these pages" and place himself "under instruction again."

He promptly pays his subscription for A.D. 1900, and I hope all who can remember him will join me in welcoming him back.

He asks, among other things, "How can a young fellow get along best with *old* people?"

Let me now address my correspondent:

My Dear Jack: I imagine, from what you say, that your feelings are somewhat perturbed by some of your older patrons who seem to think you do not (cannot) know your business because you are "so young." This reminds me of some experiences I used to have in the early days of this Magazine as its editor. Some of these experiences were advantageous and some were much against me, but I lived through all and overcame them. I will narrate a variety. About 1864 or 1865 one cold Monday morning I stood at the street door of my office waiting for the fire to warm things up. Looking out I saw two middle-aged men cross the street diagonally and come to my door. I was "young," and they seemed like well-matured giants. They came in, and I politely greeted them, daring to regard them even then as prospective subscribers. The darkest one said, "We want to see Mr. Wilson." I answered: "I am he!" "Well, we don't want to see you. We want to see *the old man*—the editor of *The Philadelphia Photographer*." I had to claim again and establish my identity, when I was informed that my visitors were Messrs. J. W. Black and "Jack" Heywood, who had come down from Boston to explain the carbon process which they were then working. They were very evidently chagrined at the youngness of their audience, but they went on heroically and secured my promise to visit Boston "to see carbon printing in practice." I often found it as I did then, a disadvantage to be "so young;" but sometimes it was the other way. Later on I visited Boston to be present at a meeting of the New England Photo. Society. It was during the time when the famous "Sliding Plate Holder" patent was being opposed by our craft. I made myself odious to the patentees by joining the opposition, and when I visited Boston they planned to arrest me and shut me up. Mr. Simon Wing, "Father" Southworth and their detectives were at the meeting with their warrant for my arrest. I was "a younger man than they expected to see," and so Mr. J. W. Black had no trouble in putting me out of the meeting right under their noses as soon as he learned their purpose; and I took the night train back to New York to write another editorial against the patent.

Loescher & Petsch, Photos., *Berlin.*

BOTH PUZZLED.

So, dear Jack, don't be disturbed when you are called "too young." You will recognize the fact that some of the best subjects presented to the camera are "*old*" people and should draw forth your best efforts to make good pictures of them. Do your best through them to secure some of the finest photographic delineations of character possible. I have a series of *pictures* of old people that were made twenty-five years ago or more in Germany, which I often turn over for pointers for study and enjoyment.

I am going to have one of them engraved and put just here to show you. Here is a case where the character of the old man is brought out by the presence of the little child. What a lovely home picture it is. The little one has probably asked a conundrum and the puzzled face of the old man indicates that he is striving to find an answer in the book before them. The finger of the boy suggests that he has found the solution, but the old man still looks stupid enough. Take courage, then, Jack. Your experiences are world-wide and as common as Hypo. I won't pursue the subject further now. I have got you reintroduced for the New Year, and next month we will try a better topic.

Let me hear from you.

Keep on doing your best. I will answer your other questions next month.

"Every man stamps his value on himself; the price we challenge for ourselves is given us."—*Schiller.*

"Turner could put infinite space into a square inch of sky."—*Ruskin.*

"I am never a real sufferer but by my own fault."—*St. Bernard.*

Truly your well wisher,
EDWARD L. WILSON.

AN "AMATEUR" LESSON TO THE PHOTOGRAPHER.

Geo. F. Sprang (amateur), *Petoskey, Mich.*

THE CIRCUS PARADE.

CAN anyone imagine anything better calculated to interest that powerful factor, the small boy, than a sight of a circus? This was the thought that struck us when we first saw the picture, here reproduced, of the long swinging line of elephants, followed by the triumphal car. The picture is a typical amateur subject, that is to say, it is a rapid exposure on an out-door subject of passing interest, and is taken rather as a personal pleasure than as a means of turning a dollar.

That such a picture is useful to the professional is evident. There is no business doing when the elephants tramp down the street—there is no business doing, all too often—and the camera could be set on some low roof or in an upper window. The least advantage of this, in the eyes of the worker, is that it is a change, but the very change onto a new scene and a different class of work is often useful as bringing new factors to be considered, and so making us think. The main use of such a picture is, of course, as an attraction. A set of half a-dozen such subjects in the window or showcase would cause everyone to come to see them. A set sent, or taken, to the newspaper should result in a notice; and it is possible that enough straight sales would result to pay the cost of the work.

The advantage of undertaking something new was strikingly illustrated to us a few years ago. In this case the artist was a worker with pen-and-ink, not a sun artist.

We wanted a sketch of an old English cottage, wooden beams showing in the walls, and a heavy straw-thatched roof, with tiny dormer windows peeping through the thatch.

The artist had been working for months on newspaper work, mostly portrait sketches of people, or comic pictures. He settled down to draw the cottage from memory, for he had seen hundreds of pictures of such a subject. But he found difficulties. He could not remember how the beams should be placed in such a house, and he quite failed to get a natural appearance to the little windows nestling in the roof. He did not know how thick the thatch should be, and when he wished to make the thatch appear like straw he could not do it. We got our picture, but not until after the artist had spent a day at the library, examining illustrated books dealing with rural England. It was a lesson to the artist; he had got so much down to the routine of "shop" that he was rapidly becoming a mere hack.

There are one or two good examples of out-door subjects, from the cameras of professionals, in *Mosaics*. One, especially, by D. Bangs, of Sleepy Eye, a natural little bit of frolic in the water, is so obviously not posed that it is entirely successful. We venture to think that such a picture quite pays the photographer in the pleasure it gives him.

The two pictures given here have one or two lessons for the amateur also. In the street scene, by the mere accident of subject, the photographer has escaped that great defect of almost all snap-shots of street scenes—their microscopic spottiness. A street crowd is usually a double mass of compact humanity, tiny heads, white against dark hats and coats, nothing large enough to be distinct, and nowhere breadth enough to give the slightest rest to the eye. Between this double mass, set in a strip of blank road, comes the procession, again mere indistinguishable patches and as ineffective as the crowds. In this photograph, instead of the usual tiny coach with its component parts of guest of honor, horses, coachmen, shining harness, and painted box, we have as the chief mass the solid lumbering weight of an elephant. Instinctively the eye rests on that as the picture is held a foot away. There is no peering closely into the picture to see if the features of a face may be distinguished, and as a result the picture gives a greater satisfaction.

Geo. F. Sprang.

DUCKS.

But the strong point in each of these pictures is their sound technique. They are good examples of sharp focus—essential in such subjects—of careful and full

exposure, proper development and printing. And herein is their lesson for the amateur. The amateur, all too early, is prone to go after what he supposes are pictorial results. Never mind pictures! What the average amateur wants is a *record* of some friend or some scene. Let him understand his exposures. Let him beware of his almost universal fault of under-exposure and let him understand development. When the amateur learns that "snap-shot" is too often a snare, and that brains are essential to success, he has made a great step forward.

The picture of the ducks is, like the circus picture, of interest as a record. One of the best pictures of this kind which we have seen recently was a mere view of a dilapidated straw stack. A little of the barn was shown, with the swing door through which the "carrier" had run the straw at time of threshing. But now the uneven top and broken sides of the stack are laden with the first fall of snow, and a couple of cows disconsolately munch at a protected corner of the straw. It is about as simple a picture as could well be imagined and with neither "art" nor pretension, but it will catch the eye of anyone who knows a farm.

ABOUT THE CARBON PICTURE.[1]

CARBON may be considered in two distinct phases—the educational and the commercial. There is no necessity for argument on the commercial score, for even the least refined of your clients appreciate the superior qualities which are so manifest. It is the educational side to which I wish to direct your attention.

Carbon is capable of being softer and stronger than albumen, with as good whites and better blacks than platinum, and, when desirable, combining all of the delicacy of definition and the many other advantages of the emulsion papers. All of these good qualities can be accentuated at will.

If you make negatives for albumen or an emulsion paper or platinum, you learn that certain tendencies must be avoided; and in your avoidance of them you are narrowed down to a course of procedure in lighting and in chemical effect, so that after a very little while you find yourself becoming narrow and limited. This, indeed, may be applied to the use of any one product.

Of course, we will all have to work for a living; and after a while we begin to feel that time used in experiment is wasted. However, if you change the term to schooling, there are many things that you can and will do without this feeling of waste. If a physician were to stop reading when he received his diploma, he would soon become *passé;* and so it is with us. If we wish to grow, it is necessary to set apart some time for the study of those things purely æsthetic and which have no bearing directly on the finance of our business.

Carbon is most exacting as to the technical qualities of your negative, and as such is the best mentor you can have wherewith to judge your status as a workman, whether you are growing or going backward.

Many of you become so used to the mere negative making that you lose your grip on the printing. A man who dines only on soup, and who does not ask for fish and the roast, is insufficiently fed; and so it is with those who make only negatives. The diet is unhealthy, for you are eating only the first course.

William Morris, of Kelmscott fame, was at soul an artist. He found that his writings were not being printed according to his notions of what constituted good taste; and he loved them so much that, in order that there be nothing unworthy about them, he made the type, printed the books, and bound them himself—with his own hands—that they might represent him and his ideas most truly.

You cannot all do all of your own work; but when a negative is really the result of a conception, it is impossible to intrust its fulfilment (which is the point) to another.

If you make such a negative and from it make such a print as you feel to be the absolute execution and completion of your design, you will grow stronger even in your negative making.

[1] Address by Pirie MacDonald, of the N. E. Convention.

Does it not appeal to you that you should make carbon prints yourself, with your own hand? For carbon is the most capable and most adaptable. Here endeth my plea for carbon. Now, in regard to pictures for exhibition, I would rather have a dozen men come here next year, each with a picture under his coat—something which is the embodiment of a conception, something of which he is proud, and something which he loves—than a hall filled with the "products of an establishment." The door to those things truly beautiful is only open to those who love the road that leads to it.

I have made money and spent it, and I will make more money and spend it, to satisfy my hunger for the beautiful.

I tell you I have not made my pictures for money alone. I have made them because I love to make them. I had a yearning to create something which was beautiful, and it is that love which is within me which enables me to delight in infinite trouble and pains.

I feel that my mission will be accomplished if I can make you *want* to make a something merely *because it is beautiful.*

Many people despise plagiarism, and justly; but the copying of a thing for the purpose of learning how it was done is not plagiarism. Ruskin, in his *Elements of Drawing*, instructs you to get certain points and copy them with a lead-pencil in order to acquire the handling; and that is the only spirit in which you should copy the work of any man. Too many people copy another man's thought and technique *in toto* and present it as their own. That is plagiarism.

Markham's *Man with the Hoe* gives rise to the thought that we are all hoeing—some harder than others. The men who are hoeing the hardest are those who are reducing their ideas to facts, those who are creating. Those who hoe the least are those who copy and plagiarize.

It is not square to have all the hoeing done by one set of men. If you hoe a little, there will be less hoeing forced on those who are already hardest worked. Now, when you go home, everybody hoe a little, and bring us a something next year that you have put your heart into, that has been made because you *loved* to make it, being utterly regardless of the dollars and cents.

You will be helping us all; for whatever comes from love is good, be it as imperfect as it may, and you will be doing part of the hoeing.

To all which we say Amen.—[Ed.]

HOW "OUR PICTURE" WAS MADE.

Probably no exhibit at the last Celoron Convention attracted more admiration or excited more interest than the single print sent by Mr. C. C. Kough, of Greensburg, Pa. Its peculiar roundness, relief, and exquisite modelling provoked innumerable questions as to the special method of lighting employed. By Mr. Kough's courtesy we are able to present to our readers not only an original *Velox* print from the negative but also a clear statement of the method used in the treatment of the subject, with another example (engraved herewith). In reply to our letter asking particulars, Mr. Kough writes:

"There is not much method about it. However, if it will be of any benefit to the craft to know how to obtain this lighting, and as it is not a 'patented secret,' I will be glad to state, as near as I can, how I proceed to get it.

"Let us understand, in the beginning, that this lighting is only effective with subjects in evening dress, where the neck and shoulders are exposed, and it is *most* effective on profile positions. Hence, its usefulness is somewhat limited.

"To make the lighting I place the sitter eight or ten feet, or more, as the case requires, from the side light, with the back to the light (mine is the old style of side and top light) with the face looking from the side light. Shut off nearly all the light from the top. If in this position the face is too much in shadow, I turn the sitter, bringing the face more 'broadsides' to the side light, so that the eye is properly illuminated without giving flatness to the face. After I get the head properly lighted I take a small head screen and place it so it will give just enough shadow on the outline of the back of the neck to give it

roundness and relief from a white ground. The whiter the ground the better. The ground must be kept far enough from sitter so that no shadow will fall on it from sitter, as that reduces the relief of the head and shoulders. When these details have had attention I remove the camera to the side light so as to get a profile view of the sitter, make the exposure, 'and the deed is done.'

"It requires some practice to put the shadow just on the outline of the neck and shoulders without shading the head too much. A *small* head-screen is best—one about eighteen inches in diameter. After a few trials this lighting can be made quite easily, and when properly done the result will more than pay you for all the time and patience it costs. It gives you beautiful roundness and good relief from a white ground. The style has brought me much new business. 'Try it.'

"Yours truly,

"CHARLES C. KOUGH."

By C. C. Kough.

LIGHTING IN PORTRAITURE.

BY F. B. SIMPSON.

AMONG the problems acing the would-be successful portraitist, none is so important or so difficult to master as the problem of illumination. Just now the principles of lighting, so ably set forth by Mr. James Inglis, are being generally followed. At the request of the editor, I give my method of lighting the sitter. It is in the main agreeable to the conditions laid down by Mr. Inglis, but I find my method less liable to give harshness and lack of gradation in the tones than his.

It appears that many photographers lose sight of the fact that the parts of the face furthest from the eye should be darkest in tone, and the parts nearest should be the lightest, with a gradation of tone from the light to the dark parts. I have seen many photographs by those high in the profession in which the reverse of the above is strikingly observable, that is, the back part of the cheek would be lighter than the front part. By a little thought you will see that this is an error. I want to impress the above on the mind of the reader seeking the key for excellence in lighting, as on this idea is founded what I am about to remark. We will suppose we are lighting a face in the old way—that is, with the most of the face in light. We will also suppose we are working with a top and sidelight, so arranged that any portion may be closed or opened at will. Should the sun enter in the least, some means *must* be adopted to stop it out entirely, and narrow frames covered with tissue-paper, working on pivots close under the light, will do this effectually, while they obstruct but little of the light. Any sunlight entering the room and striking the floor or walls will make bad reflections, and will spoil every effort to make the lighting as it should be. I have in my skylight-room a screen about 2 x 3 feet, covered with *white* muslin and fastered in a head-rest. This screen when placed over the sitter is about three feet from the head when at its highest point, but can be lowered at will. With the screen I *control* my light. My sidelight is covered with material so thick that every trace of light can be effectually excluded, or let in at will. With this arrangement I get my highlights. Bring your sitter out nearly but not quite to the centre of the room, and about four or five feet from the sidelight, and turn the face so that the nose will point in a line parallel with the sidelight. Move your instrument toward the sidelight to get the view of the face wanted, and your background in the opposite direction to suit. You are now working diagonally across the room. Put your head screen in position over the head, taking care not to cut off too much of the light from the top. You will observe that there will now be a diffused light all over the face, only the side nearest the sidelight will be a little the lightest. Now, open a small portion of the sidelight well in front of the sitter, which will let in a small amount of direct light, lighting up the prominent parts of the face. If the eyes are sunken, and there seems to be too much shade under the brows, lower the head screen. This will light up the cavities, but will render the face flat in proportion. Now move your head screen from over the head a *little* and toward the shadow side of the face. This lets on more *direct* light from the top, and renders the face bold and vigorous again, with the eyes well lighted. The next thing to observe is that the specks in the eyes (and they should always be there) are in both eyes alike. They should come on the top part of the iris, not over the centre, but more on the side nearest the sidelight. Should the speck appear in one eye only, the face is turned too far from the sidelight, and you get *the effect I spoke of*, that is, *the back part of the cheek lighter than the front part*, and to overcome this you *must* turn the face more to the sunlight, moving your camera to get the desired view, until this speck appears in both eyes. By turning the sitter more and more toward the sidelight, these specks are bound to come, and just as soon as they appear you may rest assured your sitter's face is lighted well and artistically. Of course, you can make the contrast stronger or less by using your sidelight. By this means you get that classic lighting of the nose, viz., a strong line of light down the bridge of the nose, and a highlight on the tip,

and you get the eyes perfectly lighted, and the rest will in every way be all right. This is my *rule*, and I have never known it to fail. To light a picture in the shadow style, do not move the position of the face, but move your instrument from the side-light to get a view of the other cheek. With perhaps a slight modification, the lighting will be just right. An hour of experiment will give you the points.

THE CHOICE OF A HAND-CAMERA.[1]

I AM sure that in purchasing a hand-camera many persons err in choosing one that is too light. It is more pleasant to carry about a light camera than a heavy one, but it is far easier to hold a fairly heavy camera steadily in the hand during exposure than a very light one; in fact, it is a difficult thing to avoid some slight movement in a very light camera even with fairly fast exposures. I have two hand-cameras, one of which weighs about half as much as the other; they are both of identically the same form and construction, but one is a quarter plate and the other a half plate. With the quarter plate camera I can be certain of holding it steady for an exposure of 1/8 of a second, but with the half plate I am certain up to 1/4 second. I often give hand exposures of longer duration than this, but I do not regard them as certainties. I am quite satisfied in my own mind that a little extra weight is not altogether a disadvantage.

Undoubtedly, the most important parts of a hand-camera are the lens and the shutter. These should both be of the very best, and, consequently, the camera cannot be cheap.

The question as to which is the best lens is a vexed one, but among the best it is generally admitted are the Zeiss "Planar," the Zeiss "Satz," the Dallmeyer "Stigmat," the "Collinear," the "Cooke," and the "Goerz." If used at an aperture *f*/16 or less, there is little, I think, to choose between any of them. If very rapid exposures are required, then the Zeiss "Planar" is unrivalled, working as it does at *f*/3.8, but if different foci are wanted, then the Zeiss "Satz" and the Dallmeyer "Stigmat," with their three different foci, undoubtedly stand first. I work my quarter plate camera with three Zeiss "Satz" lenses, one of 9 inches focus and two of 11 inches. This combination gives me four lenses of 5½, 6½, 9, and 11 inches focal length respectively, the 6½-inch working up to *f*/6. In addition, I have a telephoto attachment which can be fitted to the 6½-inch combination, and which magnifies the image 2½, 3, or 4 times as required. This makes a powerful battery to shoot with, but I should add that if the exposure is 1/16 second or more, a stand is necessary when the long-focus lenses are used.

It should not be forgotten that, for a hand-camera, what is required is a wide-angle lens, which should be worked at a narrow angle. The reason for this is that in a hand-camera a swing-back is out of the question. If a swing-back is used the lens has to be so much stopped down that hand exposures become impossible. But the same result can be obtained with a good rising front. Every hand-camera should have a rising front capable of shifting the lens both vertically and horizontally at least one-quarter of the length or breadth of the plate as the case may be. My camera has such a front, and as the smallest of my lenses will cover a half plate at full aperture, I can raise the front to its full extent without any loss of definition.

If lenses of long focus are to be used, then the camera must be capable of considerable extension, and this brings us to another vexed question, namely, how this extension should be obtained. Some cameras are made with a double extension—that is, when the screw is turned the front moves forward and the back moves backward, while the body of the camera remains stationary. Such an arrangement may be convenient, as the extension takes a little less time and the balance of the camera is better, but I consider it a mistake. In the modern lenses of very flat field, such as I have mentioned above, it is important that the plate should be absolutely at right-angles to the axis of the lens, otherwise you lose the advantages of these modern lenses, and may as well work with one of

[1] Contributed to the London *Camera Club Journal*, but not to be considered as editorial opinion.—Ed. *Camera Club Journal.*

the older and cheaper pattern. The extension is undoubtedly the weakest part of a camera, and there is great risk, especially after some wear, that the camera when extended will lose its rigidity. With a double extension this risk is doubled.

By L. Masure.
THE CHICAGO FESTIVAL: STATE STREET.

The lens should have an iris diaphragm capable of being adjusted outside the camera. Loose stops, or any arrangement whereby it is necessary to open the camera in order to adjust the diaphragm, are an abomination.

The shutter is a most important part of the hand-camera, and if it is not a good one there can be no certainty of obtaining satisfactory results. It should work without any jar, and if it is noiseless so much the better. A blind shutter working either in front or behind the lens is a mistake, and the focal-plane shutter is wrong in principle. The proper place for the shutter is between the combination.

Some cameras are made with an inclined mirror on a hinge so placed that, in conjunction with the lens, it forms a full-size finder. I could never work with such an instrument, for when the exposure is made the mirror flies up and the whole camera is shaken.

Some very good shutters are made to open from the centre, but I prefer one where a thin piece of metal passes across the lens, with a slot cut in it as broad as the diameter of the full aperture, and convex at each end; such an arrangement is simpler and less likely to get out of order, and a little thought will show that it lets more light through the lens.

Most good cameras have their shutters marked to work 1/2, 1/4, 1/8, 1/16, 1/32, and 1/64 second. Some of these shutters, I think, work at these speeds, and others, I am certain, do not. If your shutter is accurate you can work scientifically and make a certainty of your results; if it is not, you do not know what you are doing. With a shutter that does not even claim to work at any particular speed, hand-camera work is a mere matter of chance. A really good, reliable shutter can be obtained, but it costs a lot of money; still, it is money well spent.

The shutter should be capable of being set and released by levers or pressure-buttons outside the camera. The release should not be on the lens itself, and any arrangement of loose strings is wrong. I object strongly to those where the release is made by means of a tube and bulb. Such an arrangement will do for time exposures, but not for rapid ones, unless you have three hands.

Whatever the form of shutter, it is most important that you should be able to give time exposures of any length required, as, otherwise, you cannot work the camera on a tripod like a stand-camera.

By L. Masure.
THE CHICAGO FESTIVAL: STATE STREET.

Whether it is better to have dark slides

or a changing-box is a mere matter of opinion, but there is a certain advantage in those cameras so constructed that the changing-box fits into a receptacle at the back, inasmuch as when using them on a tripod a focussing cloth can be dispensed with.

I think I have now pointed out what I consider the most important requisites of a good hand-camera.

One more piece of advice and I have done. If you wish to get good results with a hand-camera you must be as careful in the development of the negative as in the case of one taken with a stand-camera. I am afraid that this care is not always shown. One writer even goes so far as to suggest the development of several snap-shot negatives at a time in a large dish; such a practice is certain to result in failure.

PAPERS FOR PROFESSIONAL PHOTOGRAPHERS.

BY JOHN A. TENNANT

By Boyé & Habernicht.

XLIX. A "HEART TO HEART TALK."

In the papers of this series during 1900 I propose to discuss, very frankly, certain obvious shortcomings in the professional photographer and his work. The task is not a pleasant one, but very necessary. I

take it up, not desiring to pose as a critic, but simply because I want to help the hundreds of professional photographers who are doing their best (according to their lights) and wondering why they do not win the success they seek. The photographer must be made to think—and to think hard. The conditions he has to face to-day are very different from those of ten years ago. But he does not realize it, except by a vague discontent—a continual protest that photography is a difficult and disappointing profession. He is wrong. Portraiture is being daily proved to be a most profitable means of livelihood; a profession worthy of the best thought and skill of any man. Whether he knows it or not, the discontented one is simply "behind the times." He does not think hard enough, nor often enough. He lets himself fall behind the ideas and aspirations of the people whose patronage he seeks. The successful few are the wide-awake few—men who are thinking hard all the time, and putting new ideas to the test day by day.

By A. L. Jackson.

For more than ten years my daily work has revolved about the professional portrait as it is made here and abroad. During these ten years I have seen and handled thousands of examples of portraiture; portraits from studios in every big city in the five continents, and from little places of which the map takes no account; por-

traits by men who have grown gray behind the camera, and by men and women who have explained that "a year ago I knew nothing about photography." The experience has been a remarkable one in many ways, and has given me material for a very interesting book. But the biggest fact which stands out from that experience is that the greatest obstacle to the photographer's success is his own ignorance. It

By Boyé & Habernicht.

is simply astonishing—the photographer's ignorance about his own profession and his own work. And it is inexcusable.

Nine-tenths of the photographer's work is in portraiture. If a man is skilful in the making of portraits his success is fairly assured. And photographic portraiture is something which is well within the capacity of the intelligent man or woman. It can be resolved into simple elements, and learned, acquired, like skill in brick-laying. It is more difficult than brick-laying, of course, but both crafts have their elements, which may be sorted out, understood, and mastered. It is astonishing that more photographers do not deliberately get *down* to the elements of their profession and work out the bottom facts in the making of a portrait. It is useless to worry about refinements, such as pictorial value, individuality, artistic printing methods, breadth, depth, and the like, so long as the elements are unrecognized, unappreciated, unknown. Day by day the work of professional photographers passes through my hands, and only one example in a hundred is worthy of a second glance—wasted plates, wasted time, and material—all for lack of thought. Why do not photographers *think* more and *do* less? Wherever a man has given thought in his work the effect is plainly visible in the work itself. I take up a portrait, made by a man old enough to be my father, a man whom I have been taught to respect for his skill in portraiture. I take up the portrait, the pose is faulty, the lighting carelessly managed, the accessories poorly chosen; the technical part of the work is bad. Why? He did not think; he is living on reputation; does not see any necessity for thought. I take up a batch of six portraits from a younger worker, a man who has his reputation to make and who has had only a few years behind the camera. In the six pictures there is not one which I dare put aside (on merit) for the illustration of a photographer's journal. In every one there are faults which a knowledge of the elements of portraiture would have enabled him to avoid. Is it not a shameful verdict? *Why* does he not learn the A B C of his profession? What but utter ignorance can account for his sending forth such work over his name. It is incomprehensible.

Now, let us get to a practical conclusion. The making of a portrait calls for a knowledge of three things. First, the photographer must know his light—what he can do with the volume of light entering his studio, so that he can quickly place his subject at a point where the illumination is suited to the most pleasing portrayal of the subject's personality. He must know how to modify or control his lighting to get the effect which his knowledge of the

subject indicates as desirable. He must know how to arrange the subject within the picture space—the pose or composition of the figure, and accessories within a pleasing form. And he must know how to get the picture—the individuality of the subject, pose, and illumination—in his print, by exposure, development and appropriate printing methods.

This brings us into possession of the elements—the old elements so strongly (perhaps too strongly) insisted upon by the fraternity in earlier days: posing, lighting, and chemical effect. We may sneer at these as we like, but they are the elements of portraiture and must be mastered before any refinements are attempted. It is all very well for men like Hollinger, Crooke and others to say: "We do not pose; we do not light; we develop and fix in the same tray—a dozen plates at once." Perhaps they can afford to say such things. The beginner cannot. They say nothing of the years of plodding, of the failures and experiences and hard times by which they mastered the elements. By hook or crook they have so possessed themselves of the elements that they are able to control them: they *do* pose, by the unconscious selection and arrangement of position and point of view; they *do* light, by the unconscious modification of illumination and the placing of the sitter; and they *do* know how to get what they want in the negative and the print. But the elements must be known and mastered, and the simplest expression of the elements is the old-fashioned phrase, "posing, lighting, and chemical effect." We will discuss posing in the next paper.

LIGHTING IN COMMERCIAL PHOTOGRAPHY.

BY T. N. ARMSTRONG.

In a previous article reference was made to a few branches of photography, and the important part which lighting played in connection with the same.

In commercial work, especially in these days, when so many different articles have to be photographed for the purpose of process blocks being made to illustrate trade catalogues and other similar productions, there are numerous varieties of what may be classed small objects for which special methods of lighting are required, and in not a few instances some of these can be treated quite as successfully by the aid of artificial light as would be the case with daylight, and, since the almost universal introduction of the electric light in our large towns and cities, it is largely employed by process workers, for the special reason, no doubt, that it is available at any moment. There are, however, on the other hand, articles innumerable in which daylight is distinctly preferable to any form of artificial lighting; and, still further, it will be found that some articles, strange to say, are best treated by a combination of both.

A by no means uncommon class of articles that have to be photographed is that of silver coins and medals, in which the great aim is to bring out the inscriptions and design in the strongest possible relief. Some writers in the past have advocated this being performed by the roundabout method of taking plaster casts from the original, such casts being effected either with the aid of plaster of Paris, or sulphur, or even the homely stick of good sealing-wax. To my mind, this method entails a needless amount of trouble, and seldom yields a sufficiently sharp image, certainly by no means so clear cut as when the original itself is employed, providing it has been properly placed *in situ*, and lighted so as to bring into bold relief the form and inscription such contains.

Small coins and medals are apt to give trouble from reflections quite as much as larger objects, so that special provision has to be made to avoid these nasty visitors, and hence it has been suggested that the surface of those articles should be treated with some compound, such as putty, etc., when the light surface will become deadened and the reflections avoided. Silversmiths, however, as a rule, strongly object to this application to the extremely fine surfaces they produce on their articles, and the writer knows of one instance in which a very valuable silver ornament was greatly

damaged in the hands of a careless photographer connected with process work, who evidently little knew the risk he ran when applying such a compound to a highly burnished silver article.

In point of fact, there is really no need to resort to such measures to overcome reflections in many cases. Isolated instances may be found where it is almost impossible to get rid of such visitors without an application of some kind to the surface, but these are few and far between, and an experienced silversmith can generally give valuable suggestions to any photographer in this direction, and, if necessary, prepare the articles for him.

In dealing with such articles as medals and silver coins, the burnished surfaces of them can frequently be dulled by immersion in a small quantity of ordinary toning bath,—*i.e.*, acetate of soda and gold, provided the coins are well brushed out with clean soap and water. It is, however, much to be preferred that all tampering with these articles be avoided, and, whenever possible, reflections be overcome by means of a well-devised system of lighting, and copying the same with long-focus lenses.

Some small articles may be successfully photographed through a long box or tunnel, the sides of which are lined with black velvet, thereby allowing only a vertical light or top light falling on them. A long box having about six inches of its one side cut out answers for this purpose admirably, provided the box be placed in an outside situation and no direct light be allowed to enter the open end, where, of course, the camera is made to face the object. The box thus practically becomes a miniature studio.

Other articles, such as those having a highly enamelled surface, can be well treated without any preparation, by lighting them with reflected light entirely. This form of lighting is best done by artificial light, the article being placed *in situ* in front of the lens. Two powerful paraffin lamps are placed at equal distances on each side of the object, but in the rear of it, and sufficiently to each side as to be outside the field of the lens. In front of the object being photographed are placed two slabs of plaster of Paris, or, at a pinch, two large sheets of blotting-paper tacked to suitable supports. The light from the lamps strikes the white surface of these reflectors, and is thereby, by means of irregular reflection, caused to light the surface of the enamelled object, and, if the disposition of the lamps and reflectors is carefully adjusted, there will be no trouble from surface reflections, and articles thus lighted are easily photographed by means of ordinary paraffin lamps.

Articles such as china plates and valuable crockery-ware likewise require special treatment in lighting. Sometimes work of this description can be got over more satisfactorily when very high-class results are required by applying to the makers of the articles, who will always be only too glad to provide the same pattern in an unglazed form; but, of course, this in many instances is not possible, for old china and similar articles cannot be duplicated in such crude forms. I once photographed for book-illustration purposes a number of these articles, and found that, by a special method of lighting them with daylight in an ordinary room furnished with one window, I was master of the situation. These china plates were placed *in situ* against a velvet background, stretched upon a stout box that sat easily on a table; the box carrying the object was placed right up against the window; in this position the plate appears very dimly lighted, but the moment reflected light is thrown upon it by means of two white reflectors placed at each side the plate instantly becomes beautifully lighted and free from reflection.

Those who are anxious to execute work of this description should try the following simple experiment, from which much may be learned regarding what can be effected by means of reflected light alone: Let an ordinary dinner-plate be placed against an opaque object, such as a stout board or box, placing it, say, five feet from the window on a table, so that the plate, when standing on its edge vertically against the box, faces to the inside of the room, or, in other words, when being photographed the lens points straight against the light. After the plate is placed in this position two pieces of white cardboard are made to throw light by reflection on the plate, one from each side at similar angles. The moment the reflectors are brought into position, that moment the most minute detail in the design of the plate will spring into view, and it is easily photographed without any troublesome reflections, *provided the foreground is prepared with a non-*

reflecting surface such as any ordinary dark woollen material, and care be taken to have no bright brass fittings on the camera front. This may be accomplished by cutting a small hole in the focussing cloth, just sufficient to allow of the lens working through it, or, stated simply, when there is nothing to cause reflections, none can be present.

Other articles require special methods of lighting by reason of their particular shape. In this class may be mentioned delicate skeletons of animals, birds, and fishes, and in this kind of work the difficulty generally takes the form of avoiding objectionable shadows from one part of the object falling upon another portion of it.

In cases of this description much will be found to depend upon the form of the particular objects being dealt with, and, if artificial light be used, it should be diffused through muslin screens, or even ground glass. In almost every instance, however, some provision will require to be made so that the background is able to be placed at some distance behind the object. With dark-colored objects, white backgrounds, when placed close up, are certain to yield eyesores in the form of shadows, which, of course, must be avoided. These can sometimes be overcome by placing the object being photographed against a sheet of glass having holes drilled through it. By this means almost any object can be held *in situ* against a transparent screen, which will not appear in the negative; and also some articles can be attached to such transparent supports by means of marine glue, and, when a suitable background is placed at a sufficient distance behind these sheets of glass, no eyesores in the shape of shadows will be apparent.

Another class of objects which sometimes gives trouble are transparent objects like glass globes containing botanical specimens and such like. As a rule, these are best treated by photographing them direct against the light, when, by placing a muslin screen or sheet of ground glass between the window and the object, good results will be obtained.

In all inside work, no matter what the object be that is being photographed, there is always *a best method of lighting* to employ, and it should be the aim of every photographer to reason out in his own mind what that method really is.

Another very difficult class of subject is found in large metal disks or plates bearing designs or inscriptions. Among these may be instanced memorial brasses. These are, by reason of their weight, difficult to handle, and but seldom met with in really suitable positions as regards surroundings and light. Whenever possible, they are best treated exactly as oil paintings, *i.e.*, by lighting them with a very high top light and standing the object vertically.

When this is not available, they may be done by reflected daylight, after the manner described for articles having an enamelled surface like china plates, only greater attention must be paid to the reflectors, seeing the surface is always of considerable extent, and the main point is to equally illuminate the same. A case of this sort recently came under the writer's notice, where, by reason of faulty lighting, much trouble was experienced in bringing out, even with the utmost care in printing, the fine engraved lines forming the beautiful design of the brass.

If so much thought is required in the lighting of objects in-doors, outside subjects offer quite as much scope for the exercise of thought, if any particular effect be desired in the resulting picture.

In the early days of photography—*i.e.*, in dry and wet-collodion days—in landscape working, sunlight was deemed a *sine qua non*, but now, with our rapid plates, all this is changed, and it is impossible for any hard-and-fast lines to be laid down as to the best light to employ in landscape work. So much will depend upon the tastes of the worker and his striving to delineate some particular effect in light and shade, and atmosphere, all of which come under the cloak of what is now termed pictorial photography.—*British Journal of Photography.*

Useful Arts and Handicrafts is the general title of a series of little books which should prove very useful to photographers, just being published by F. Dundas Todd, Tribune Building, Chicago. Nos. 1 and 2, received, deal with *Designing and Drawing* and *Dyes, Stains, Inks, Lacquers, Varnishes and Polishes.* Price, per number, twenty-five cents. A list of the series can be had from Mr. Todd.

DALLMEYER ON TELEPHOTOGRAPHY.[1]

SINCE, in 1891–2, Mr. Dallmeyer first described the principles of the telephotographic lens, the significance, uses, and advantages of telephotography have been regarded with ever-increasing interest by photographers and by the public. The exaggerated reports and really remarkable telephotographic pictures published in the public prints have still further multiplied this interest. With the exception, however, of a few scattered papers dealing with the use of telephotographic lenses in special fields, very little satisfactory information concerning the subject has been published, apparently because of the difficulties involved in a simple statement likely to be of practical use to the average worker. Out of these conditions there arose a definite demand for a book which should present, in a simple but authoritative way, the theory, practice, and common-sense of the subject.

This Mr. Dallmeyer has done with signal success, and his work deserves the highest recognition. His book is carefully considered, touches the bottom of the subject, is clear in its explanations to anyone acquainted with arithmetic, and altogether convincing in its illustrations. In *Telephotography* we have one of those rare books which leave us richer in practical knowledge. The author in his preface is careful to acquaint the reader with an intelligent review of the development of telephotography since its earliest suggestion, by Barlow in 1834, and records the labors of Drs. Schroeder, Miethe, and Duboscq, with his own earliest attempts at the construction of a telephotographic system. Among the acknowledgments is one which gives to Dr. P. H. Emerson credit for first directing Dallmeyer's attention to the subject of telephotography, and at the end of the book a *bibliography* is given which will enable the student to pursue the subject completely if he so desires. In this latter we miss any reference to Dr. Rudolph's monograph on *The Nature and Application of Telephotographic Lenses*, published at Jena, in 1896; and Roster's *Note pratiche su la Tele Fotografia*, published at Florence in 1893.

Opening the treatise with a brief but simple chapter on *the properties of light*, the author takes up in successive chapters the formation of images by the "pin-hole camera;" by means of positive and negative lenses; the formation of enlarged images by (*a*) two positive lens-systems and (*b*) by a positive and a negative system combined (the telephotographic lens); the use and effects of the diaphragm and the rendering of perspective by the telephotographic lens. The practical applications of the telephotographic lens in portraiture, in groups, and hand-camera work, long distance photography, architecture, survey, and astronomical work are next dealt with and interestingly illustrated with examples. The final chapter deals with working data, such as focussing, exposure, development, etc., and a series of abridged formulæ for reference completes the work.

The portrait photographer will be especially interested in that part of the book which treats of the advantages of the telephotographic lens for portraiture, and how it enables him to avoid distortions and to secure correct drawing and true relative proportions in his arrangement of the figure and its accessories. The engravings from portraits made with ordinary and telephotographic lenses show these advantages very clearly, and we hope that this portion of the book will receive the attention its importance deserves. The section devoted to telephotography with the hand-camera is one which will be very generally appreciated, and completely answers the many difficult problems which arise in this application of telephotographic lenses. The heart of the book, however, is the clever chapter on the formation of enlarged images, wherein Mr. Dallmeyer explains, with an illustration at every turn, the problems involved in the variable magnification of the image given by the positive lens, by means of a negative lens more or less separated from the former.

The book is not merely the only book on the subject, but must, for some time to come, remain *the* book to be consulted by

[1] *Telephotography:* An elementary treatise on the construction and application of the telephotographic lens. By Thomas R. Dallmeyer (London). 147 pp. Crown, 4to. Illustrated with 26 plates and 66 diagrams. Price, $4.00 *net* Tennant & Ward, New York.

those interested in telephotography. We commend it to our readers as a work in which they will find both pleasure and profit, apart from the practical information which it offers upon the subject to which it is devoted.

ON FAILURE.

THERE are very few men who have the honesty to admit, even if they have the perception to see, that their failures in life are brought about by their own shortcomings. They set failure down to ill luck, to the treatment they have received from other people, to want of capital—to everything, in fact, but the real cause, the insufficiency of their own efforts or their unsuitableness for the occupation they have chosen. One cannot always expect success, and it is not given to all of us to win the prizes of life. Out of every score who are striving, perhaps only one can win. But remember the prizes are going all the time, and if you fail once there is still opportunity; find out the cause of your failure, and remedy it in the next attempt.

The true man knows he can do better than he has done if he tries. The best men are those who do the best with what talent they have. We may not all have the capital which glints in the sunshine and chinks on the counter, but if we have our faculties about us we possess capital in the shape of brains, which, though not recognized as assets in the bankruptcy court, are worth twenty shillings in the pound to the man who knows how to use them to a good purpose.

It used to be said that in the days of our fathers a little capital and a very little aptitude for business was sufficient to ensure a living, but what we want to-day is men with a little capital and a *great* aptitude for business.

The times have changed, are changing still, and will change more rapidly than heretofore, so that the business capacity and enterprise that would have made a fortune twenty years since is utterly inadequate to-day. The times need a knowledge of business far in excess of what was formerly required for men to live, even without accumulating a fortune. It is an age when men must think more; the brain must be kept active, quick to grasp every side of a question at once, so as to know exactly what is best to do. To cultivate such a faculty men must not cease learning when they leave school. They must read, they must listen, they must keep their eyes open to the teaching of everything around them, never allowing prejudice to warp the judgment and prevent them from grasping the advantages of the inventions and discoveries of a progressive age. We want practical knowledge to go hand in hand more with advanced science. Competition is, indeed, so keen that the stern monitor, necessity, will compel the union of scientific thought and practical work.

It is not all, however, that a man should be possessed of a scientific and a practical education to be successful in business, any more than that the possession of money will ensure his success. We see too often on the one hand the practical man wasting the hard-earned savings he gained as a useful and valued employé in now trying to run a business for himself, and on the other hand some poor unfortunate who has been placed by his friends in a position for which nature has made him totally unfit.

The elements of success are in a man's personal character, and among the attributes he must possess to be successful in the highest sense of the word are the virtues of patience, honesty, and industry. To avoid failure needs energy, concentration, skill, and thrift, in fact, to do anything great needs assiduous application and tenacity of purpose.—*Penrose's Monthly.*

Mosaics, 1900, has gone splendidly. All its old readers, and many new ones, have been heard from, and by hundreds, and fifties, and dozens, the large edition is rapidly melting away. The general verdict is that the little annual leads all its bigger competitors in practical and pictorial interest, and we believe that the verdict is true. Those who have not yet secured a copy should not further delay. The stock in hand cannot last long, and the book will not be reprinted. Paper covers 50 cents, post free to any address.

THE TEACHINGS OF THE DAGUERREOTYPE.[1]

BY MAJOR-GENERAL J. WATERHOUSE.

WHEN I had the great honor of being invited by the Committee of the Traill Taylor Memorial to deliver the second of the series of Memorial lectures, it became a question what subject I could best deal with and would be most appropriate. Three presented themselves:

1. "The Evolution of the Process Block," which was a subject in which our lamented friend, Mr. Traill Taylor, took a deep personal interest.

2. "The Relationship of Color to Sensitiveness," which would have dealt with color photography.

3. "Teachings of the Daguerreotype," which is the subject selected by the committee for the present lecture.

The first lecture, given by Mr. T. R. Dallmeyer, was connected with the optics of photography in relation to the lens, which is the first requirement in the practice of the art with the camera.

The second requirement is the sensitive plate, and now I propose to take you back to the consideration of the earliest sensitive photographic plates in which silver haloid compounds were used.

Value of Daguerreotype as a Teaching Process.

Although daguerreotype has long been abandoned, it is capable of teaching us a good deal about the action of light on the silver haloid compounds which form the basis of our modern dry plates, as Prof. Meldola has pointed out in his *Chemistry of Photography*. It may, therefore, well form the starting-point of lectures in the present series, dealing with photographic processes based on salts of silver.

Daguerreotype was for a long time considered a unique and perfectly special process without any intimate connection with the ordinary photographic processes, and, of course, so long as mercury alone was used for the development of the invisible image on the silver plates it was so to a very great extent. Carey Lea was among the first to show that this view is erroneous, and that the daguerreotype image is subject to the same laws as govern the wet-collodion and other processes for making negatives. Last year I was able to go further in this direction and show that daguerreotype plates could be developed in a practical way by the ordinary acid ferrous sulphate of silver or acid pyrogallol and silver used for wet-collodion plates, as well as the ordinary dry-plate developers, though in this latter case only faint negative images were produced. I also showed that the sensitive surface of iodized or bromo-iodized silver could be rendered more sensitive by treatment with suitable organifiers or halogen absorbents, such as tannin and similar bodies, as in the old dry-collodion processes, and that they could be rendered orthochromatic or color-sensitive by treatment with suitable dyes, like collodion or gelatine plates. The process may, therefore, be looked upon as an epitome of the photo-plate, and from this point of view is of special value, because it depends upon the employment of haloid salts of silver formed by the direct union of the halogen and the metal, and, therefore, in their most simple and purest forms as regards freedom from organic mixtures and complications.

This being the case, we ought to be able to derive a good deal of valuable information from a careful investigation of this process in its various stages and modifications with different halogens or combinations of them, and with different methods of developing and dissolving away the images formed by the action of light. From such an examination I think we ought to be able to obtain fuller knowledge of the probable nature and method of formation of the invisible developable image; and, even if we do not succeed in this, we may, at any rate, acquire information which may be of use in future investigations. The subject is one of considerable difficulty, and one which I feel requires very much fuller special knowledge and more time and attention than I have been able to bestow upon it. In fact, I have only been able to carry out a small part of the programme I sketched out above.

[1] Being the second Traill Taylor Memorial lecture. Read before the Royal Photographic Society of Great Britain, November 14, 1899.

Description of Daguerreotype.

For the benefit of those among you who may not know how daguerreotypes are produced, it may be briefly stated that a very highly polished surface of silver, either alone or plated on copper, is made sensitive to light by exposure to the fumes of iodine and bromine, with or without an admixture of chlorine. After a suitable exposure in the camera, which, even at its best, is very considerably longer than is necessary with a gelatine plate of ordinary rapidity, the plate is exposed to the warm vapor of mercury, which condenses and attaches itself only to those parts upon which the light has acted, and in proportion to the intensity of the action and the length of exposure up to a certain limit. In this way an image is obtained in which the lights are formed by a white, powdery amalgam of silver and mercury, while the shadows are formed by the highly polished silver surface, which appears black in contrast with the whiteness of the amalgam when held in a suitable light. This effect is heightened by the process of gilding, which at the same time fixes the powdery image to the plate and makes it less susceptible to injury.

I have here some very beautiful specimens of daguerreotypes, taken many years ago in the Crystal Palace by the late Mr. C. Matheson, and presented to the Royal Photographic Society by Messrs. Negretti & Zambra. They will give you a good idea of the results obtainable.

It is not necessary—at any rate for experimental purposes—to use silvered copper plates. Glass silvered by the ordinary silvering processes answers very well for most purposes, and is cheap and readily obtainable. It can easily be polished with a little rouge or *well-washed* tripoli powder, on a chamois leather pad, but, in cases where the surface was rather rough and resisted the rouge, the polishing paste known as "Globe Polish" has given me good results. It is applied with soft cotton or cotton-wool. The objection to it is the greasiness, but this can be removed by polishing off with dry precipitated chalk. Instructive results can also be obtained, even more simply, on silver leaf laid down on glass paste coated with a clear crystal varnish. Specimens of results on all such plates are before you.

The first thing that strikes us in daguerreotype is that the sensitive surface of the plate is formed by the direct combination of halogens, iodine, bromine, or chlorine, generally the first two, and sometimes all three together, with the metallic silver coating of the plate. The question arises, therefore, to which of these elements is the sensitiveness due: To the silver? to the halogens? or specially to the combinations? and how is it brought about?

Sensitiveness of Silver to Light.

I can find very little recorded about the sensitiveness of metallic silver to light beyond the fact that Moser found that silver, in common with most other metals, was sensitive to light. He exposed a silver plate for some hours in weak sunlight under a dark cut-out screen which was not in contact with it, and when the plate, which showed no change, had been allowed to cool, it was exposed to the vapor of mercury at about 170° F. A clear image of the screen was produced, those parts where the light had acted had caused the deposition of a quantity of mercury. Plates of dark mirror glass and copper treated in the same manner showed the same result.

The series of phenomena which were dealt with in Moser's researches, especially those connected with the production of contact images, are, however, so peculiar in their results that it is still difficult to know to what cause they are really due. They have generally been attributed either to some impurity of the surface itself, to vapors given off by it, or to thin films of air or other substances in contact with it or otherwise affecting it. Robert Hunt was of opinion that many of Moser's effects were due to heat or thermic radiations.

In discussing the contact phenomena the discovery of sensitiveness of silver to light, as shown by the experiment described, has been overlooked, but I have been able to verify it, and, in addition, to obtain a visible printed-out image on the plain silver plate without any previous preparation—as you will see—also on silvered glass plates. In both cases the light seems to exercise a bleaching action—*i. e.*, the exposed parts appear lighter than the unexposed and attract the vapor of mercury. By other experiments as to the electrical behavior of silver partly exposed to light and partly unexposed, both in the dry

state and immersed in water and other liquids, I have found that silver, though not very sensitive, does show undoubted sensitiveness, and it is also shown by the change of color of silver deposited on the cathode plate of a cell through which an electric current has been passed.

Carey Lea found that the three forms of allotropic silver he obtained—viz., A, the red soluble; B, the dark brown or blue insoluble variety; and C, the golden colored—were acted on by light. A and B became brown after some hours' exposure, but with C the color became lighter. This last result is similar to some of my own observations.

The oxides of silver are all sensitive to light and are decomposed by it. According to Hunt, they lose oxygen by exposure, being first converted into a suboxide and then into metallic silver. In presence of organic matter the reduction is more complete.

Hydrogen Peroxide a Sensitizer for Silver.

I have also obtained some very interesting results with silvered glass plates fumed with peroxide of hydrogen before exposure, and find that it is capable of acting somewhat in the same way as iodine in sensitizing the plate.

Mendeléeff remarks that the nearest approach to the properties of hydrogen peroxide is afforded by a non-metallic element—chlorine; its action on coloring matters, its capacity for oxidizing and for evolving oxygen from many oxides is analogous to that exhibited by hydrogen peroxide. I do not know to what extent this similarity of hydrogen peroxide to chlorine extends to the other halogens, but the fact that there is such a relation, and that we find that hydrogen peroxide can act as a sensitizer to silver, seems worth noting for further inquiry. I have here three plates—one sensitized by fuming with peroxide of hydrogen, another with chlorine, and the third with iodine; the results, after exposure to light and development with mercury, are practically the same on all three.

In the case of the daguerreotype, as in other photographic processes with silver compounds, the sensitiveness of silver itself to light has hitherto not been regarded as in any way an essential factor in producing the results which are usually attributed to the action of light upon the haloid compounds. It is, however, certainly of interest to know that it is sensitive, and even visibly so, and that images can be produced upon it by the action of light, which may be developed by condensation of mercury vapor, or by the precipitation of molecular silver with an ordinary acid iron and silver developing solution. As a matter of fact, nearly all the photographic phenomena, such as the development of an invisible image, the production of a visible image, reversal by over-exposure, and the effects of pressure in producing a developable image can be shown on the plain silver plate.

A further investigation into the nature of these images would be very interesting, and might show that the part played by the silver is a more important one than is usually assigned to it, and that this is the case seems to be shown by some of the results obtained in printing out on the iodized daguerreotype plates.

Properties of the Halogens.

We now come to the halogens generally used in combination with silver. Though not very sensitive to light in the pure form, chlorine, iodine, and bromine are so when combined with other substances. They are all marked by their strong affinity for hydrogen, and to this is probably due the ready decomposition of substances containing them when exposed to light in presence of water or organic substances containing hydrogen. Compounds of chlorine are the most readily decomposed in presence of hydrogen, then those of bromine, and, lastly, those of iodine.

Chlorine may be combined directly with hydrogen under the action of light, but not iodine. Bromine and hydrogen combine under the influence of light at 196° C. and form hydrobromic acid. Watery solutions of chlorine and bromine are decomposed by light with formation of the corresponding hydrogen acids. A watery solution of iodine is not decomposed by light, but a solution in alcohol is so to a slight extent. The blue iodide of starch is distinctly sensitive to light.

The relation of the halogens to hydrogen is the reverse of their relations to oxygen, for which iodine has a much greater affinity than chlorine, while bromine occupies an

intermediate position. In presence of water iodine can act as an oxidizer, but has very little bleaching power. Iodine, however, does not combine with oxygen under the influence of sunlight, either in presence or absence of water. There is no combination either between bromine and chlorine with oxygen in sunlight. It may be noted also that oxygen is not converted into ozone by the action of sunlight.

According to Mendeléeff (English translation, 5th edition, I. 465), under the influence of light chlorine is able to replace hydrogen by virtue of an action termed *metalepsis*, which is always accompanied by the formation of hydrochloric acid. In the dark chlorine does not usually act on hydrogen compounds, but the action commences under the influence of light. The direct action of the sun's rays is particularly propitious to it. It is also remarkable that the presence of traces of iodine added to the substance subjected to metalepsis often produces the same effect as sunlight. This action may be due to the formation of iodine-chlorine, which reacts more easily than chlorine. Bromine and iodine possess the same properties. Iodine itself, however, does not act by metalepsis on hydrocarbons, on account of the easy decomposability of hydriodic acid, especially under the influence of light.

As not only their oxygen compounds but also their hydrogen compounds have *acid* properties, the halogens are elements of an exclusively *acid character*. This character is more strongly developed in them than in any other elements. This acid character of the halogens is very distinctly marked in all photographic processes.

Robert Hunt says of them (*Researches on Light*, p. 279): "Chlorine, iodine, and bromine, it is well known, act with considerable energy upon metallic bodies. If, however, any polished metal is exposed to the action of them in a diluted state, the combination is at first exceedingly small, and the films that are formed by either of these three elementary bodies upon any metal undergo considerable change under the influence of the sun. In most cases it appears that these bodies are set free, and the metal left in a state of very fine division or oxidation. Copper, tin, iron, zinc, lead, pewter, bismuth, and several other metals have afforded the same results. It is still more remarkable that films of bromine or iodine on glass are found under the action of the sun to act in a similar manner."

Combinations of Halogens with Silver.

According to Mendeléeff, silver gives insoluble and exceedingly stable compounds with the halogens. They are obtained by double decomposition with great facility whenever a silver salt comes into contact with halogen salts. (As I lately showed, this combination takes place even with dry powdered salts). The degree of affinity of silver for iodine is greater than that for chlorine or bromine, so that, when exposed to light, the iodide does not part with its iodine as the chloride and bromide do with a portion of their chlorine and bromine.

Beketoff has explained the fact that silver iodide is more stable than the chloride or oxide by an original hypothesis; that the most stable compounds are those in which the weights of the combined substances are equal. Thus silver oxide is less stable than the chloride, and the iodide is the most stable.

Silver iodide is also more stable in respect to the action of light than silver chloride. Silver chloride quickly darkens, and appears to be decomposed into chlorine and silver. Silver bromide and iodide are much more slowly acted on by light, and, according to certain observations, when pure they are quite unacted on—at least, they do not change in weight; so that, if they are acted on by light, the change they undergo must be one of a change in structure of their parts and not of decomposition, as it is in silver chloride. Silver iodide in presence of a large excess of silver, as in the daguerreotype plate, darkens as readily as the chloride does when exposed with excess of silver nitrate.

As a combination of silver with iodine vapor forms the basis of the sensitive surface of the daguerreotype plate, we may first of all consider it.

Silver Iodide.

Silver iodide is usually formed by precipitation from mixtures of solutions of silver nitrate and potassium or other metallic iodide. According as the silver or iodine is in excess, it has either a full yellow color and is slightly darkened by light, or a very pale yellow color, almost

white, and is scarcely changed in color by light.

We are, however, more interested in the comparatively little known forms of anhydrous iodide produced by the direct union of silver and iodine, and generally in immediate contact with metallic silver.

Before proceeding to consider the composition and behavior under the influence of light of the sensitive surface of silver iodide on the daguerreotype plate, it may be as well to examine the action of iodine upon silver in a very fine state of division. This can be readily done by adding iodine in various proportions to precipitated silver, and the resulting mixtures are more easily tested with various reagents than can be done on a plate.

Unless the iodine is in a very small proportion compared with the silver powder, the two may combine with a sudden rise of temperature and flame, the iodine vaporizing and going off in violet fumes. The iodine must therefore be added only a little at a time, and be kept constantly stirred. In this way the full quantity required to produce the iodide, AgI, may be added.

Mixing precipitated silver thus with iodine in different proportions, such as 108 parts by weight of silver to 12.7, 38.1, 63.5, 95.2, and 127 parts by weight of iodine, we obtain a series of powders varying in color from a gray or chocolate-brown to an olive-yellow, and finally brick-red tint. This last was shown by the preparation containing 108 parts of silver to 127 of iodine. It still contained a quantity of uncombined iodine as well as some uncombined silver inside the grains; but if left in the air for a short time, the excess of iodine evaporated and the powder turned to a deep orange-yellow.

All the lower compounds are readily blackened by light, but the higher ones, with 63.5 parts of iodine (subiodide, Ag_2I, (?)) and upward, are not so visibly blackened, and with the full quantity of silver and iodine to form the iodide (AgI) the mixture does not blacken at all in the light, just in the same way as the ordinary yellow iodide prepared by precipitation is not blackened.

This shows that the darkening is a function of the silver, increasing with the excess of silver and diminishing or entirely disappearing with excess of iodine.

If, however, we add precipitated silver to iodine the yellow iodide is not formed at all, even when the full combining proportion of silver is added. This seems to be due to the iodine forming a coating on the silver grains, which stops further action. The resulting compound is of a dark brown color, with no grains of yellow iodide, as is the case when the iodine is added to excess of silver. By leaving the brown mixture till the excess of iodine has gone, we obtain the same brick-red compound, which becomes yellowish on further exposure to the air. If more silver be added to take up the excess of iodine the lower compounds are formed. I have not been able to very closely examine these curious compounds or mixtures of silver and iodine, but they seem worth further investigation.

There is one curious fact connected with the darkening of these mixtures or lower iodides which has already been noted, and that is that there is no loss of weight after exposure to light. Iodine is not set free, as is the case with chlorine or bromine, and it is difficult to know what the action really is, and whether there is any chemical decomposition by catalysis or otherwise, or whether the change is only structural. Recent researches by H. Scholl, to which attention will be drawn further on, seem to throw considerable light upon this question.

Composition of the Sensitive Surface of the Daguerreotype Plate.

That the sensitive surface of the daguerreotype plate is formed by one of these lower compounds of silver and iodine, and not of the pure iodide, AgI, is, I think, shown by the fact that if we iodize a thin film of silver leaf or silver on glass till all the silver has combined with iodine, we obtain an almost transparent pale yellow film, which no longer darkens very visibly even in bright sunshine, and is very insensitive, requiring long exposures to produce even the developable image. If, however, we expose a fairly thick plate of silver for several hours to the fumes of iodine this yellow iodide is not formed at all, and we have instead a dark-brownish or olive-colored deposit, which is readily darkened by light, just as the iodized silver mixtures were, and as the daguerreotype plate is. Some of this darkened deposit treated

with potassium iodide partly dissolved, the remainder still retaining its blackness; the addition of distilled water turned it yellow, the further addition of KI further dissolved it, but still left a dark purplish precipitate, which, being treated with nitric acid, behaved exactly like the original unexposed deposit, evolving iodine. HCl gave no precipitate of silver chloride, and therefore free metallic silver could not have been present.

Hence the surface of the daguerreotype plate may be looked upon as iodized silver, or a compound containing a very small proportion of iodine in more or less loose combination with a large excess of silver. On exposure to light no iodine is set free or lost, but compounds are formed at the surface containing a large proportion of silver, and therefore darkening more readily up to a certain limit, while the iodine penetrates more deeply, and attacks the underlying silver surfaces. That this is the case is shown by the fact reported by Moser, and also by Robert Hunt, that the darkened surface of an exposed daguerreotype plate may be removed several times over, and still the under surface will remain sensitive. I have myself done this fifteen times over without exhausting the iodine or entirely destroying the printed-out image first impressed on the plate, and it was very remarkable how this original image came up apart from the ground after each exposure, which was taken up to solarization point or beyond.

If, however, the proportion of silver to iodine is normal or in defect, and we have the anhydrous yellow iodine or orange super-iodide formed, we find that it does not darken in light, or only becomes a deeper yellow. A sample of pure yellow iodide, which was obtained from a well-known firm, shows this effect very distinctly on exposure to strong sunlight, but it loses this deeper color again in the dark, becoming once more a pale lemon yellow.

Professor Meldola has suggested that the silver iodide on the daguerreotype plate forms its own sensitizer, and from what I have seen of the deepening in color of the above samples of iodide and others under the influence of light, or when treated with an excess of iodine, I have little doubt that this is the case. As we shall see later on, iodine may even exert an active sensitizing action upon pure silver iodide.

Talbot's Iodine Rings.

One of the most striking points with regard to the action of iodine on a polished silver plate is the series of interference colors it produces, in accordance with the thickness of varying composition of the film of iodine produced, and I cannot do better than show you an old experiment which was first tried by Fox Talbot, and described in the *Athenæum* for 1839, p. 643, also in Hunt's *Researches on Light*, p. 102. If we place a small crystal of iodine on a polished silver plate or a silvered glass and warm it gently with a spirit lamp, we shall at once see a series of about seven sets of concentric rings, forming prismatic or interference colors exactly similar to those of Newton's rings, or rather Nobili's rings, which are Newton's rings reversed. First, outside we have a bright yellow, and within this there arise successively rings of green, red, and blue, and then again a fine yellow circle, centred by a grayish spot on the place occupied by the iodine. .Now, if we cover up one-half of the series of colored rings and take the plate into sunshine, we shall see one of the most striking and beautiful exemplifications of the action of light it is possible to conceive. The rings are sensitive to light, their colors change and become intensified, producing quite a new series of rich prismatic tints, which completely illustrate and prove the fact I have just drawn your attention to, that darkening increases in proportion to the excess of silver, and lessens with the increase of iodine. The outer circle, which before exposure was only a pale rose color (the most sensitive iodine color), is now a deep brilliant green, shading into a strong reddish-violet, and then into beautiful dark blue, succeeded by a broad white or very pale green, merging into a deep yellow, succeeded by a series of fine well-marked concentric rings of much the same tint as the original unexposed rings, but deeper and brighter. The tints vary somewhat, according to the length of exposure. The outer rings produced by the thinnest stratum of iodized silver, furthest from the centre, must be in a very loose state of chemical aggregation. Talbot says the colored rings seem to con-

sist of silver iodide in various stages of development. If we turn the plates downward at an angle of 45° to the light, we shall see that the colors are reversed and show complementary tints.

There is another method, due, I believe, to Wiener, by which these colors can be shown, and almost more brilliantly, by resting the plate on a glass cylinder while being iodized. This produces a double set of colored bands, one on each side of the central blank space, as you will see. Viewed by reflected light, the complementary colors are very rich and almost fluorescent in their luminous intensity.

These gorgeous tints do not, however, represent any distinct chemical change in the composition of the sensitive surface beyond the production of films of iodized silver of varying thickness; and if, after exposure to light, we submit the plate to the fumes of mercury vapor, or treat it with an acid iron and silver developer, we shall get no distinct image of the series of rings, but only two or three bands or regions of increased or diminished sensitiveness. With short exposures these bands are fairly distinct, as you will see from the example I have with me. The same result is obtained with images simply fixed with hyposulphite of soda. The outermost rings show an increase of action which is succeeded in the broad bluish or greenish-white band by a decrease, the action increasing again toward the central series of rings. The behavior of these colored rings under colored glasses will be noticed further on.

Relative Sensitiveness of Tints Produced by Iodizing.

The relative sensitiveness of the various tints produced on the surface of a daguerreotype plate by the vapor of iodine was first studied by Professor J. W. Draper, of New York, and his results are recorded in a paper published in the *L. D. E. Phil. Mag.* for September, 1841. He found that the plate passed through the following stages of color:

1, lemon-yellow; 2, golden-yellow; 3, reddish-yellow; 4, blue; 5, lavender; 6, metallic; 7, yellow; 8, reddish; 9, green, etc., the differences of color being produced by the differences of thickness in the film of iodide, and not by any difference of chemical composition.

Talbot's rings show this fairly clearly. The outer rings are colored much as stated by Draper, then comes the strong second yellow, followed by red and green, and, as the iodine acts longer and produces a thicker film, the rings become closer and darker as well as less sensitive to light. I find, however, that they attract mercury vapor readily after exposure.

Having prepared nine plates showing the different tints above indicated, Draper exposed them under uniform conditions to the light of a gas flame, and found that No. 1 showed a well-marked action; No. 2, still stronger; but that the rays had less and less influence down to No. 6 (metallic), in which they appeared to be almost without action; but in No. 7 (second yellow) they had recovered their original power, being as energetic as in No. 2; and from that they declined again.

Hence, as Draper says, we see that the sensitiveness of the iodide of silver is by no means constant; that it observes periodical changes, depending on the optical qualities of the film, and not on its optical composition; that by bringing the iodide into those circumstances that it reflects the blue rays, we greatly reduce its sensitiveness, and still more so when we adjust its thickness so as to give it a gray, metallic aspect; but the moment we go beyond this and restore by an increased thickness its original yellow color, we restore also its sensitiveness.

Upon this and other observations, Draper, so early as 1841, laid down, among others, two important propositions upon which all photographic action is based:

"That the chemical action produced by the rays of light depends upon the absorption of those rays by sensitive bodies, just as an increase of temperature is produced by the absorption of those of heat.

"That the sensitiveness of any given substance depends on its chemical nature and optical qualities conjointly, and that it is possible to exalt or diminish the sensitiveness of any chemical compound by changing the character of its optical relations."

The first of these propositions has been termed by Professor Meldola Draper's law.

The practical application and extension of this principle led the late Dr. H. W. Vogel to the discovery of the modern system of orthochromatic photography, and

by applying suitable dyes, or, as he called them, optical sensitizers, to the ordinary photographic dry plates, he found that they could be rendered sensitive to the rays at the less refrangible end of the spectrum for which they are ordinarily insensitive. I cannot at present go further into this question, but it is important to note that this most important discovery was based to some extent upon Draper's observations of the different degrees of sensitiveness produced on daguerreotype plates, according as the color of the sensitive surface of silver iodide affected its absorption of the rays of light.

(To be continued.)

TINTYPES.

BY EDWARD PALEN.

I AM not after the money there is in it, though thousands of people are making a living out of 10-cent ferrotypes. It is the ferrotype dry-plate of which I am thinking at present, and solely as a novelty. A photographer is sometimes interested in a church or has to take part in a bazaar or may be the country fair, and perhaps the tintype may prove the thing he wants. There is one good thing about a tintype. Finished and delivered, the whole transaction is over. There is no order for duplicate prints and no negative to be stocked. The result is just sufficiently beautiful to create a laugh, but it won't by "supplying the demand" prevent a possible customer from coming to the studio for the dozen of cabinets.

Ferrotypes should be worked in the brightest diffused light possible—keep out of the direct sunlight—for they are slow, and exposure must be more or less correct. When a picture is delivered complete ten minutes after the exposure is made there is no careful manipulation of development and printing. One rough treatment has to suffice for all exposures. If exposure is too short the shadows will be sheer patches of black. Over-exposure, on the other hand, makes everything gray-white and flat, without either contrast or detail. Get the exposure right, and you have the secret of success.

A good one-solution developer is:

Sodium Sulphite . . .	1 ounce.
Carbonate of Soda . . .	2 ounces.

Dissolved in 10 ounces of boiling water; then add:

Potassium Bromide . . .	1 drachm.
Hydroquinone	1 "

Let it stand twenty-four hours. The fixing solution is:

Water	10 ounces.
Hypo	2 "

Two drachms of the fixing solution should be added to the developer, or just a little more if the weather is very warm. But be careful not to get too much hypo, or the print will come out with a greenish veil.

When you have exposed pour enough developer over the plate—in a developing dish—to cover it. A negative image soon appears, and when the lights begin to blur take the plate out of the developer and rinse well. Then fix it, and a positive print is there as soon as fixation is complete. Rinse it again, and don't be afraid of the water. The hypo has all to be washed off. The plate should then be dried over a gas or oil light. Grip the edge of the plate with a pair of pliers and hold it steadily over the flame just so near that it dries evenly. If it dries patchy marks will be left on it. Sometimes the plate veils over with a fog, which can be removed. If so, after the plate is dried, rinse it thoroughly again, and then wipe it all over with a ball of cotton-wadding or other soft material. Be very careful in wiping, but cover the whole plate well. Then dry again, and the fog will probably be gone.

TRANSFERRING CLOUDS FROM ONE NEGATIVE TO ANOTHER.

THE advantages which naturally follow from a negative which already has suitable clouds of printable density are too great to enumerate, says P. Rowe in the *Practical Photographer*. Unfortunately, such negatives have so far been very scarce on

account of the difficulty in obtaining them, as that is only possible under exceptional conditions.

As clouds we must have, the one method is to print them in afterward from a separate negative. We all know what a trouble this means, whatever process we may happen to be working in. In fact, as regards platinotype and carbon, in the majority of cases it is not much more than a guess, as it is an impossibility to see when the correct depth has been arrived at, and actinometers are not satisfactory unless elaborate tests have been made beforehand.

This would all be saved if the clouds were actually on the negative itself; you could then enlarge it, print it in any process you like, make lantern-slides from it, etc., and in every case the clouds would be the same, as part of the whole affair.

As we must forever give up the hope that suitable clouds will always be passing at the time we require them, the question arises whether it is possible to tranfer them from one negative into another. As far as I am aware, this has not yet been attempted, but in the following I wish to show it is possible, and that satisfactory results can be obtained with comparatively as little trouble as printing them in afterward.

Choose two negatives, one a landscape, with a fair proportion of blank sky, the other a cloud one of medium density, suitable, of course, in lighting, etc., to the landscape.

The next thing is to remove the film from the cloud negative and place it on the top of the landscape negative. To do so, immerse the cloud one in—

Sulphite of Soda	2 ounces.
Water	10 "

and there let it remain for about ten minutes; at the end of that time, with the finger-tip or tuft of cotton-wool, gently release the film from its glass support, and commencing at one corner, go all around the edges first, then work toward the centre until the whole is detached, when at once transfer into clean water.

By this time it will have enlarged itself considerably, and if desired may be brought back approximately to its original size by a bath of saturated solution of alum. If this is not sufficient, wood alcohol offers a certain cure. Before putting in alcohol it should be well washed, to remove all trace of soda. Now for few minutes soak the landscape negative in water, to soften the film, then float the loose cloud-film on to the cloud portion of the landscape, being careful to put the original *face* of the loose film next to the film side of the landscape.

Hold the two before a sufficiently strong light to enable you to see through both, and adjust the clouds in the position you wish them to assume in the finished state, taking care that the horizon line of the loose clouds overlaps the horizon line of the landscape. Drain off surplus water and go carefully all over for air-bubbles; it is *most important* that these should be removed, either with cotton-wool or a brush; when this has been done, lay it in a horizontal position to dry, which should be in a cool atmosphere and not near the fire, as the top film would be liable to come off through contraction. Make, when the whole is quite dry, a fairly strong solution of Farmer's reducer as follows—

Ferrocyanide of Potassium .	15 grains.
Hypo	50 "
Water	2 ounces.

Dissolve the hypo first and add the ferrocyanide of potassium just before using. This is better done by a brush. Apply it on top of the clouds, keeping it as evenly as possible over the whole of them, and well up to the horizon-line, which it does not matter if you occasionally go over.

Keep on with the reducer until you can plainly see the clouds when looking through the negative by the light reflected from a piece of white paper. This will take, say, quite three or four minutes, and by that time it should be finished. Practice, of course, will teach exactly when it is, but as a guide, lift up a small portion of one of the top corners of the upper film; if indications of clouds are visible on the one underneath, then it is done, but if not, keep on with the reducer until they are.

Soak the whole in running water for an hour to get rid of the reducer and remove the top film, if it has not already come off in the washing water.

It will then be seen that apparently the clouds have transferred themselves from one negative into the other, for on the landscape negative will be reproduced identically in every respect an exact copy of the original cloud negative. This, as I

take it, is by the action of the reducer acting on the half-tones first, which, not having such a large deposit of silver naturally do not protect the deposit underneath to the same extent that the denser portions of the clouds do. In other words, the film underneath is protected from the action of the reducer according to the density of that particular portion of the cloud film which is over it. Thus the half-tones are only protected half as much as the highlights, and are consequently reduced proportionately, whereas the shadow in the clouds, having no deposit to protect the film underneath, reduces the same completely away, making a corresponding shadow in that film.

The whole process sounds much more difficult in print than it really is. In fact, it is very little more trouble than having to print the clouds in afterward, and more particularly is it to be recommended if several copies from the same negative are required. Then the possibility of printing the same clouds in two or three different views is done away with altogether.

The density of the clouds in the finished plate will depend principally on the density of the original sky in the first place, and the length of time the reducer is allowed to act in the second. If, for instance, the sky in the landscape was so dense as to be an impossibility to see through, some of the highlights in the view itself must of a necessity be the same, so that it would take the same time for the highlights to print out as it would the clouds, presuming them to have been put in. On the other hand, if the sky portion is thin, so will the view portion be thin, and so will be the clouds (when they are put in), and all will print out in harmony together.

In the case of trees, etc., jutting from the horizon, a little care must be exercised in going round them, but in many cases it makes hardly any perceptible difference if you ignore them altogether; but if you do go around them, be sure to go just over their outline with the reducer, and not leave a distinct mark as far as the reducer has been applied.

In the case of some sunset clouds that I was once reducing in, the horizon line of the cloud negative, being composed of small trees away in the distance, was included; in other words, the trees, when the cloud film was being adjusted, were allowed to come above the horizon line of the landscape, with the result that in the finished print it would have been an impossibility to have told they were not there when the negative was being taken. The method is not difficult.

PHOTOGRAPHERS' ASSOCIATIONS.

BY W. H. POTTER.

According to the law of evolution, which demands an orderly progress in all human affairs, from less to more, from less definiteness to more definiteness, the times are becoming ripe for a forward movement in the life of our associations, State and national.

Now, as in all such affairs orderly progress means growth and development, it is apparent that co-operation of the State associations among themselves and with the national organization will inaugurate that higher evolutional series which is becoming so obviously pressing in our associate affairs.

But, as all such movements, to be natural, must necessarily begin with the elemental or simple in order to a true evolution of the more complex or organic; therefore to be more definite and functional, it is plain that the first movement should originate in the State associations as the units of organization of which the national body would constitute the whole.

However, as State associations are already in being, we do not need to begin *de novo*, but only to readjust and co-ordinate these associations with one another, and create a practical union between them and the national organization. This brings us to the question: "How best can this be accomplished?"

Locally, we are few in numbers, hence it is evident that the State units should combine into tri-State or divisional units, and from these representatives, apportioned according to the active members of the several units composing the division, and

relative to the membership of all the divisions, should be elected to serve as the legislative body of the P. A. of A., the judicial and executive departments belonging to the national association as a whole.

Proceeding thus, we would not only establish a representative organization whose enactments and decisions would be voluntarily binding and obligatory upon us, but we would lay a foundation for a code of ethics and could erect a standard of artistic excellence which would always transcend as we moved up toward the apparent goal.

The aim is not to play into the hands of the politicians or mere office-seekers, nor to pipe or dance to the groundlings, but to create an environment in which the ambitious seeker and willing worker after photographic excellence may find a mode of evolution in photography equal to all his æsthetic and artistic requirements as to direction and aids associative.

Judging, not from theories, but from the conditions which now confront our State associations, two questions are becoming quite acute. The question of finance, and that of keeping up by increasing the interest of the members, as increase of numbers is quite out of the question with the older organizations.

It is as plain as a handle on a jug that as at present constituted the State associations must become more and more self-supporting or go to the wall. But how is this possible, unless they can create a greater interest, and thereby secure a larger attendance at the conventions. Yet have they not played every card in their pack hitherto, including those furnished by the manufacturers and dealers, and which are being gradually withdrawn from their deck?

Hence, is it not as obvious as a man's nose, that there must necessarily be a greater concentration of members, means, and efforts in order to a greater economy and larger interests?

To be useful to its members, an organization must be able to do more than merely live—it must be meat and drink to its members in the intellectual sense, or why should they pay for its support?

As State units, standing alone and apart, our local associations are about as complete as it is possible to make them. In this case evolution means taking in more territory, taking in more members, both in the quantitative and qualitative sense, and reorganization on a larger scale; consequently it is a question of expansion and assimilation in order to a higher and more engaging life.

And, therefore, it is hoped that the journals will do their utmost to call out expressions on the subject. It will be of no consequence to me how adverse the criticisms of the plan herein suggested may be, if only they be constructive of something better. The conservatism that says: "Peace, peace, be still, let things alone," works decline and fall.

Let the old be the ground of the new, but without change the old cannot become the new any more than the Old Testament religion completely answers for that of the New.

It is not the aim to submerge the individuality of the State organizations, but, on the contrary, to energize them to more satisfying ends. As bodies lose motion, they must take in more matter or else disintegrate. Growth means expanding, and development means functional growth, the completeness and intensity of the parts to the body, political or otherwise.

Finally, then, the only matter open to discussion concerns the method of procedure.

INDIANAPOLIS, December, 1899.

AMMONIUM PERSULPHATE.[1]

BY H. SCOTT LAUDER.

AMMONIUM persulphate, a white crystalline salt, somewhat deliquescent, and represented by the chemical symbols NH_2, SO_4, was introduced to the photographic world a little more than a year ago by Messrs. Lumière, to whom photographers are indebted for so many good things in applied chemistry, and the advantages of

[1] Extract from a paper read before the Edinburgh Photographic Society.

its peculiar action were soon recognized—that of dissolving away the denser masses of metallic silver in apparently much greater proportion than it removes the thinner and more superficial layers which form the half-tones and faint detail in the shadows, and it is now considered a very necessary addition to the laboratory. More especially, perhaps, it is useful to the inexperienced amateur, whose negatives so frequently partake of the soot and white-wash giving variety. It is in this class of negative, under-exposed and over-developed, that the characteristic action of the persulphate is found most beneficial, as by it the over-dense highlights can be thinned down to any extent required, while the half-tones and shadow details are acted on to a comparatively slight extent, so that harsh contrasts are greatly modified, just the reverse of what would take place when using the ordinary potassium ferrocyanide and hypo reducer (Howard Farmer's), with which the half-tones and faint superficial details would be cleared off before the highlights were much altered.

The chemical reactions which bring about this apparently paradoxical result do not appear to be as yet thoroughly understood, and considerable discussion is still taking place between the upholders of the various theories in the endeavor to account for what seems to be, at first sight, a selective action of the persulphate on the denser parts of the negative.

The hypothesis put forward by Messrs. Lumière is that the chemical action takes place chiefly in the deeper parts of the film, and the silver dissolved out as a double sulphate of ammonia and silver is again partly reduced to metallic silver on coming in contact with the excess of persulphate in the surrounding solution, which metallic silver is redeposited on the surface of the film, thus keeping up the average density there at the expense of the silver removed from the deeper parts of the film.

The amount redeposited is, however, less than that removed, so that by prolonging the action of the reducer, the whole of the negative image would be in time obliterated.

This explanation of the action of the persulphate is not considered entirely satisfactory by later observers, and the general opinion among them appears to be that a uniform reduction takes place throughout the film, in direct proportion to the density or mass of the silver molecules in each part of the film—that is to say, that if reduction were continued until, say, a third of the silver were removed from the densest highlights, exactly a third of the image would be removed in all other parts of the film.

It occurred to me that, if Messrs Lumière's theory were correct, a negative made by exposing the plate in the camera with the glass side to the lens ought, on being treated with the persulphate, to have the same appearance as an ordinary negative treated with Farmer's reducer—that is to say, the half-tones and shadow details, now lying in the deeper parts of the gelatine film and in contact with the glass, would be the first to disappear, leaving a negative with stronger contrasts than before treatment.

To test this I exposed two plates on the same subject, one in the usual way, film to lens, the other reversed, glass to lens; they were exposed for the same time, and developed together, development being adapted to give extreme density in the highlights. They were then reduced together with ammonium persulphate, and the result was that both negatives were of much the same character with no special loss of thin detail in either. This proves, at least, that the persulphate has the same action on the silver image, irrespective of its position in the gelatine film, and bears out the opinion of recent observers that the action is more of the nature of a reduction of the amount of development, and is uniform throughout the film in proportion to the deposit of silver. This opinion is also supported by the result of photometric measurements.

Now, as to the practical application of the reducer. If the negative has been dried it should be soaked in water for at least half an hour to soften the film.

I find that the most workable strength for the solution in which the negative is to be immersed is about three per cent., say fifteen grains to each ounce of water. It dissolves easily, and as it appears to be unstable in solution, it should be freshly dissolved shortly before use.

When the desired effect is produced, the action can be stopped at once by immersing the negative for a minute or two, after

a slight wash under the tap, in a 10 per cent. solution of sulphite of soda. The plate should then be well washed and dried. The silver image acquires a slight pinkish hue, which becomes deeper if left too long in the sulphite of soda solution.

Ammonium persulphate, although a powerful solvent of metallic silver, has no chemical effect on silver bromide. Advantage can be taken of this property to make reversed negatives by contact direct from the original negative, and also to make positives instead of negatives direct from the camera exposure.

To make a reversed negative by contact from the original negative, the process is roughly as follows: The exposure having been made in a printing frame, as for a lantern slide, the plate is developed in the usual way, but instead of being put into the fixing bath it is placed in a strong solution of persulphate from 6 per cent. to 10 per cent., by which the positive silver image is dissolved out of the film. The bromide of silver remaining can now, after a short exposure to light, be developed and fixed, and forms, of course, a negative image. To make a positive direct from an exposure in the camera the procedure is the same, the *negative* image in this case being first removed, and the *positive* which is left being developed and fixed. The whole process has been very fully described by Mr. McIntosh in *Photography*, numbers of last July.

I made several attempts to produce a reversed negative by this process, but without much success; they all turned out very flat and foggy affairs. It seems very difficult to get rid of a residuum of reduced silver, but bad as they are I pass round the best of them to show that the process is practicable if not very practical.

I hope I have made it clear that ammonium persulphate has put a new power into the hands of photographers. The golden rule, to expose for the shadows and let the highlights take care of themselves, can now be carried out to the utmost limit without misgiving.

A whitewashed cottage in full sunlight, framed in dense foliage, need not be passed by, development may be pushed to any extent to secure detail in an under-exposed foreground, and printable clouds can be recovered from the densest sky.

In portraiture, likewise, the modelling of features lost in density can be reclaimed, and the folds of a white dress will reappear. Old negatives, put aside as hopelessly hard, will now again see the light, and will be transformed by this wonder-looking reducer into satisfactory printers.—*Edinburgh Photographic Society.*

OUR PICTURES.

In the pictures with which we open our new volume the photographer will find many helpful suggestions. The beautiful frontispiece, printed on *Special Velox* paper, from a negative by Mr. C. C. Kough, brings before our readers a style of lighting which will commend itself to the public as well as to the critical portraitist. On another page the maker of the picture describes his method of working, and this adds further interest to the two examples of the method which we are able, by his courtesy, to present in our pages.

The portraits by Messrs. Boyé & Habernicht, of San Francisco, offer valuable lessons in the treatment of different classes of subjects in harmony with their characteristics. In a later issue we are planning to present a more completely representative display of the work of these gentlemen, whose studio is one of the most prominent in the metropolis of the Pacific Coast.

The portrait of a lady, by Mr. A. L. Jackson, from his prize exhibit at Celoron, was sent for *Mosaics, 1900.* We are glad to give it publicity here, as showing the growth of its maker, whose work has shown continual progress since we first saw it in 1883.

Out-door workers will be pleased with the night scenes and other views which fill out the collection, and we hope they will set our readers thinking. The night scenes were made on Seed's non-halation plates, backed with a coating of lampblack, honey and alcohol. The lens used was a Zeiss Anastigmat, Series IV., with a solid black spot at the centre of the lens, half the size of the stop. The exposure was for twenty minutes.

EDITOR'S TABLE.

TWO VETERANS DECEASED.—Since the issue of our last number death has erased from our subscription list the names of two veteran friends of photography:

DR. EDWARD H. WILLIAMS, of Philadelphia, died of "heart trouble" in Santa Barbara, Cal., December 21st. He was a clever amateur photographer. When we first knew him, away back in the early seventies, he was chumming with our mutual friend, JOHN CARBUTT, then in Chicago. He was General Superintendent of the Pennsylvania Railroad, residing at Altoona, Pa. In that position he was of material aid to the members of our National Photographic Association, as he worked enthusiastically in securing the best possible railroad arrangements at convention times, both with his own and other lines. In the course of time he abandoned his railroad position and became a member of the firm of BURNHAM, WILLIAMS & CO. (Baldwin Locomotive Works), Philadelphia, and travelled in the interest of his firm. He crossed the ocean many times, crossed the Continent oftener, and went three times to South America. On these occasions he always carried a camera with him, and thus became a most prolific maker of photographs of superior quality. One of his first duties, he declared, was to become a constant reader of WILSON'S PHOTOGRAPHIC MAGAZINE, and he continued loyal to it to the last, although we could never induce him to tell of his experiences in our pages. He did much for the cause of education in the East and in the West.

THOMAS MACKELLAR, Esq., died at his home in Germantown, Pa., suddenly, of pneumonia, on December 29th. Mr. MACKELLAR was about eighty years of age, and for more than a third of his life was a subscriber to this MAGAZINE. He was the head of the large type-founders' firm of MACKELLAR, SMITHS & JORDAN, in Philadelphia, whence all the type used on our MAGAZINE for many years was purchased. Mr. MACKELLAR deemed it a duty to encourage such magazines, and hence became a subscriber to ours. For many years we enjoyed his personal acquaintance and attended the sessions of an institution in which we were fellow officers. Thus we learned to know him and to love him as few had the opportunity to do. He was a learned man and a poet, and had published several volumes of his productions. He was always "going about doing good," and has soothed the sorrows of many an aching heart. Though so old a man, he was young in heart, and was always genial and generous.

The passing away of such men as these is a loss to our art, for, like DAVID and JONATHAN, "they were lovely and pleasant in their lives."

Fisherman's Luck; And Some Other Uncertain Things. By HENRY VAN DYKE. With 13 full-page illustrations by STERNER, SMEDLEY, RELYEA, and FRENCH, and from photographs. Crown 8vo. $2.00. Contents: Fisherman's Luck; The Thrilling Moment; Talkability; A Wild Strawberry; Lovers and Landscape; A Fatal Success; Fishing in Books; A Norwegian Honeymoon; Who Owns the Mountains? A Lazy, Idle Brook; The Open Fire; A Slumber Song. CHARLES SCRIBNER'S SONS, publishers, New York.

Do not be afraid to read this splendid book, even if you are not a fisherman. It will drive the blues away as quickly as the "greedy" trout depresses the most gorgeous "fly" out of sight. It is not all about fishing — any such a thing. We thought it was when we first tried to make out what sort of fish are pictured on the cover; but as Dr. VAN DYKE says, on page 18, "Life was meant to be uncertain;" and now we have read the book we are content with *our luck*. It is true (is it not?) as the author says, "There is nothing that attracts human nature more powerfully than the sport of tempting the unknown with a fishing line." Chance is "an aid to virtue," he thinks. "Fishing is almost entirely a matter of luck, and that is why it never grows tiresome." So, in this book, *fishing comes first* (though with equal claim photography might well be put first in matters of "luck"). Nevertheless, much attention is given to birds and flowers, and it is made plain that although a man may start out with fishing in his mind he may return with "a mind full of grateful recollections of flowers that seemed to bloom for his sake and birds that sung a new, sweet, friendly message to his tired soul." We are carried through all sorts of delightful excursions—to Norway, to New Hampshire, and to various other places where one may find, in fishing and otherwise, that "the only philosophy that amounts to anything, after all, is just the secret of making friends with our luck."

The book is full of most encouraging truisms which fisherman and photographer alike may appropriate. For example: "A surplus of opportunities does not insure the best luck." "I would

rather see one fair opening in life than be confused by three dazzling chances."

The pictures in the book are finely engraved, and those evidently from photographs are well taken and interesting. The whole make-up causes one to fall in with Simon Peter's historical resolve, "I go a fishing," if I have never been before, and take what *luck* comes. That is what "*fisherman's luck*" means.

THE Portland (Maine) Camera Club recently held a most successful exhibition of photographic work by amateurs of the State. Over two hundred pictures were shown, many of them of very high practical quality. We congratulate the officers of the club upon the success of this their first public exhibition.

THE AMERICAN ARISTOTYPE COMPANY has just placed on the market a new *Self-toning Printing Out Paper*. If its quality equals that of the other well-known specialties of the company the amateur should be happy. We will give the new product a careful trial, and report upon it in our next issue.

A REPORT of the recent *Salon* of the American Institute, held in New York, will be given in our February number, with illustrations of some of the best pictures.

THE LOVELL DRY PLATE MANUFACTURING CO., of New Rochelle, N. Y., announces a new edition (revised) of its practical little book on negative making. Among other LOVELL novelties are a new plate for lantern-slides and transparencies, and a print made from a negative on a LOVELL plate, exposed and developed three years after the plate was made and sent out to the consumer. This latter gives ample proof of the keeping quality of the LOVELL plate, and was as clear and crisp in shadows and lights as the most critical maker of negatives could desire.

THE GUNDLACH OPTICAL CO., of Rochester, has issued a circular letter notifying the trade that it is "not in the combine" recently formed by certain manufacturers of hand-cameras. Another well-known firm "not in any combine" also promises interesting developments. Evidently the last year of the century is to be a lively one as far as combiners and anti-combiners are concerned.

The British Journal of Photography Almanack for 1900 comes to our table, bulkier than ever, rearranged, extra illustrated, and as solidly useful as ever. It is the biggest money's worth we know of, and the wide-awake photographer should have it on his book-shelf for reference. G. GENNERT, 24 East 13th St., New York, is the American agent.

NEBRASKA PHOTOGRAPHERS' ASSOCIATION.—The Executive Committee of the Nebraska Photographers' Association met in Lincoln recently, and plans were made whereby the next convention will be one of the most useful Nebraska has ever had. Nebraska was one of the first of all the States to hold a State meeting, and she proposes to set the pace this year for others to follow. Last year two beautiful silver gold-lined cups were awarded to men out of the State for competitive exhibits, and it has been the thought and desire of the committee to place on the list of awards this year inducements that will interest and entice others ambitious for inter-State honors. The convention will be held in the University Art Hall, one of the finest lighted halls of its kind in the West, and the interest and influence of the Hayden Art Club has been assured, which will help to make this meeting one of the most instructive held. The dates of the convention are May 22, 23, 24, and 25, 1900.

ALRAC TOWNSEND,
Secretary.

IF, in the past, there had been one strong point that could be made against the kodak it was the unavoidable waste of film which occurred when one wished to make one or two or even a half-dozen exposures. This anti-film argument will no longer be valid, for the EASTMAN COMPANY is now furnishing cartridges of six exposures each for all kodak sizes except the 1½ x 2 pocket, and cartridges of two exposures each for the 3½ x 3½, 4 x 5, and 5 x 7. Thus equipped, the amateur can work his instrument with convenience and economy, whether it be for a couple exposures at home or for a hundred pictures on his vacation outing. Just at this season of the year, when home portraiture, both by time-exposure and flash-light, is so much in vogue, the small rolls will be highly appreciated. They load in daylight in exactly the same manner that the dozen-exposure rolls do, thus removing all need of the dark-room except for developing. This is a long step in advance for film photography, and is one which every photographer will surely appreciate.

We are also advised that the EASTMAN Flash Sheets have been reduced from 40 cents to 25 cents per package, which will doubtless make this excellent specialty more popular than ever with home-workers.

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FEBRUARY, 1900.

WILSON'S PHOTOGRAPHIC MAGAZINE

DEVOTED TO PHOTOGRAPHY. MONTHLY: ILLUSTRATED.

OLD vs. NEW METHODS IN PORTRAITURE 49
A TIMELY SUGGESTION. By H. C. Stiefel, Ph.D. 55
EXECUTIVE MEETING OF THE P. A. OF A. AND PRIZE LIST FOR 1900 . 56
TINKERING WITH THE DEVELOPER 58
OLD PROCESSES. 59
KALLITYPE. By G. E. Brown 60
THE PENNSYLVANIA CONVENTION 62
NEWS AND NOTES 63
AN ADDRESS BY PIRIE MacDONALD 65
A PORTRAIT OF LOUIS PRANG 69
PORTRAITS OF OLD PEOPLE 71
LETTERS TO JACK—AND THINGS OLD AND NEW 73
THE SALON OF THE AMERICAN INSTITUTE 75
HOW TO MAKE THE IDLE CAMERAS PAY 78
TEACHINGS OF THE DAGUERREOTYPE. By Major-Gen. J. Waterhouse, I.S.C. 80
GOOD WORDS 88
DEVELOPMENT AND DEVELOPERS. By Chapman Jones 90
THE PHOTOGRAPHERS' COPYRIGHT LEAGUE 92
OBITUARY 93
STRIPPING FILMS FROM GLASS 94
EDITOR'S TABLE 95

OUR PICTURES:

Portrait of an old man. Negative by D. D. Spellman. Print on Rough Velox Paper.
"In Springtime." Engraved from a photograph by James Arthur, Detroit, Mich.

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PORTRAIT OF AN OLD MAN
BY D. D. SPELLMAN, DETROIT

PRINT ON ROUGH VELOX PAPER

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WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

VOL. XXXVII. FEBRUARY, 1900. No. 518.

OLD vs. NEW METHODS IN PORTRAITURE.[1]

THE past three or four years have witnessed a very important change in professional portrait methods. From one end of the country to the other photographers have been awakened to the idea that the old methods of portraiture do not satisfy the requirements of to-day. A change of some kind was evidently necessary as a means of relieving the stagnation of business which followed the "panicky" business years 1890–95. Here and there men attempted to solve the problem by putting an unusual amount of individuality into their methods and work. Gradually these few "progressives" founded what has become known as the "new school," and to-day the fraternity may be said to be divided into two classes. There are those who still favor the old methods of "plain, straightforward portraiture," making portraits which, whether they have "pictorial value" or not, are technically and photographically good. In this "school" we may class such portraitists as Falk, Steffens, Strauss, Rösch, Guerin, Gutekunst, Steckel, Schumacher, Randall, Taber, Somers and others—all men whose work has won for them high reputations and an apparent prosperity. The "new" school is distinguished by its less rigid adherence to photographic or technical quality, and a distinct striving after "pictorial" or "painter-like" effects in its work. Sometimes the "new school portrait" is thoroughly good photographically; sometimes it is, technically considered, a very poor example of photography. But in the hands of the intelligent and skilful worker it almost always exhibits the qualities of character, individuality, feeling, etc. (in other words, picture qualities), in a measure which makes it decidedly interesting. In this "new school" we may place Mrs. Kasebier, Miss Ben Yusuf, Miss Weil, Miss Watson, Hollinger, Appleton, Pierce, Spellman, Histed, Harris, Dyer, Core, Brenner, and a host of others, many of whom have been most successful along their special lines.

We believe that the time has now come when it will be advantageous to the craft to have a convention to discuss these schools, which, as we say, practically divide the fraternity into two distinct classes. To this end, a few weeks ago we attempted to secure expressions of opinion concerning the "old" and the "new" from some of the best known workers on both sides. The replies received are full of interest and will doubtless prove of practical help to our readers. We will endeavor to give place to all letters received touching upon the subject, and invite every photographer to send in his opinion. The letters will be given as they come. Our editorial summing up will appear at the conclusion of the series.

I. THE HAPPY MEDIUM.

The question "Is the modern (or 'freak photography') method of portraiture as advantageous as the old-fashioned way of plain, straightforward work?" is

[1] The reader who may desire to inform himself concerning the inception and growth of the "new" movement in professional portraiture will find interesting papers on the subject on pages 326, 390, 485, and 548, vol. xxxiii.; pages 53, 147, 152, 166, 195, 212, 281, 292, 340, 347, 366, 387, 392, 401, 423, 436, 446, 449, and 549, vol. xxxiv.; pages 17, 65, 76, 102, 109, 135, 166, 189, 215, 225, 246, 257, 262, 269, 301, 308, 338, 388, 401, 433, 441, 457, 489, 490, 502, and 537, vol. xxxv.; and pages 74, 113, 122, 145, 171, 204, 215, 226, 262, 299, 305, 318, 373, and 543, vol. xxxvi. of this MAGAZINE.—ED. W. P. M.

one not so easily answered, as might appear at first thought, by the adherents of either side of the argument. Good men on both sides of the question have advanced very strong, almost convincing talk; but if a little consideration is given to their arguments, and the proverbial grain of salt added, it will be discovered that "the wish is father to the thought," and that the man who says the old school is the better is himself better adapted to making that kind, and cannot quite bring himself around to making a success of what he terms "freak pictures," and *vice versa*. The freak maker, in an extreme sense, is a child of the amateur craze, and could no more make the old straightforward, round, well-lighted, faithful portrait than he could fly.

There are two phases to the question, of course: which method, or style, is better for the advancement of portraiture as an art, and which is the better way from a business point of view? As I said in the course of some remarks before the Virginia Convention last spring, no man can set himself up as a doctor of art, for we can search the scripture of art from time immemorial down to date, and we find the whole job-lot of would-be authorities writing a mess of conglomerate contradictions, each supremely happy in having arrived, after years of toil, at *his* grand conclusion of what constitutes art, and from which pinnacle of fame he deigns to look down upon the common herd and dare anyone to say him nay. Now, I am thoroughly imbued with the idea that there is lots of humbug and tomfoolery buried into and woven around that little word art. One man, for example, to whom we grant great chunks of wisdom as an art critic, picks up a picture and expatiates, with a mouthful of beautiful words, upon its merits and demerits. Another man, with full as great a reputation for having his gray matter thoroughly soaked with art knowledge, picks up the same picture, and says "He's another." So that in trying to decide what really *is* art in photography, we are led into a veritable labyrinth.

Every picture maker should be possessed of more than ordinary intelligence, not only by the study of what others have written or said, but by his own observation of nature, and especially human nature, in all its phases, from the infant in arms to decrepit old age, in health and prosperity, in want, squalor, and misery, the knowledge and remembrance of which make him at the time of picture making feel within himself that subtle something, indescribable, yet tangible, which, as if by magic, guides the hand to its portrayal. This is art, as I think it should be, a spontaneous outgrowth of the close communion of head, heart, and hand.

As to the business end of the question: which is the better way, "freak," or straightforward, "good old way?" that is hard for any *one* man to answer for *all*. It would seem, from my experience, that a happy medium can be struck. In our business we find it always the best policy to cater to the wishes of our patrons, even though their wishes seem to us to be mere whims, always remembering that a pleasant state of mind is most conducive to the loosening of the purse-strings. We have many patrons, people of intelligence and refinement, who want the so-called "freak," and we have buckled right down and made it for them, and have added to our coffers by so doing. On the other hand, many old-timers, solid business men, will have none of it in theirs. We at once bow right down, and make what *they* wish. In other words, we try to be diplomatic with the customer. We are after his dollars, and *he* thinks "money talks." We let him have his way, and he pays us for it. To be a specialist, and only make one kind of work, may pay in some places and under some circumstances, but, generally speaking, I like the broad-gauge way the better. I think every man should know his own home-grounds better than any one outside can tell him, and if he be the right man in the right place he will work out his own salvation. One thing should be remembered: we live in a progressive age. By progress we mean going forward; that means leaving *some* old things and ideas behind, and advocating something new. Any new thing is a novelty. Now we are at it. "Novelties" is the catchword of trade, the life of business to-day. Why not have novelties in pictures? Something different from the old thing, even if we *don't* think it is as good. Bury your opinions; some will like it and pay well to have it. I make it a point to each week hatch out one new style of pic-

ture; that is fifty-two in a year. Lots of them are bad. Some of the worst ones have taken the best with the public. When you make pictures for conventions or for your own use, let them be art, brimful and running over with art, but don't cram too much "art" down your customers' throats, unless they like the taste of it. If they like it, fill them up with it. Remember, everybody's brain is not so susceptible to art feelings as yours; theirs is in an infantile state, so to speak, and most youngsters thrive best on the food which is most palatable to them.

M. R. Hemperley, Philadelphia.

2. ORIGINALITY REGARDLESS OF METHOD.

In answer to your letter just received, would say that I do not do portrait photography, devoting my time entirely to genre work. Perhaps for this reason I am not as well fitted to state what "school" of pictures is the best from a business stand-point.

Originality, personality, and artistic taste, in connection with good mechanical manipulation, I find necessary in my work, and the more good thought I can put into my work the better my results in a financial way. I do not favor extremes, unless it is absolutely necessary in order to portray some particular subject in view. Softness, good modelling, correct lighting, and natural posing should constitute good handling, and the *more originality* you can combine with good handling the more likely you are to gain national fame, *and your work will be recognized at a glance by its individuality.*

Donald Roberts, Detroit.

3. A BROADSIDE FOR THE "OLD" METHOD.

Guerin, of St. Louis, stands in the front rank of photographers as an artist and a connoisseur. He is a practical workman, and his opinions concerning a matter of taste or artistic merit should be held beyond cavil by the profession; but, as men are of different minds, *de gustibus non disputandum* is the final decision.

It was, therefore, with great delight that I read Guerin's letter concerning "Freak Photography,"[1] and I fully coincide with his ideas on the subject. If Guerin is not right in his stand, then the world does not move from good to better; then study and observation and hard work accomplish nothing of progress and advancement; then the artists of the olden times, with their crude colors and imperfect tools, are the cynosures, and the later disciples of art should be only imitators. This is all rot. The painters of to-day as far exceed the old masters in harmony of colors, in delicacy of detail, in correctness of drawing, and in beauty of finish as does the lily exceed the best efforts of them all. Nature, then, is the teacher that we must all go to for instruction in art matters. Man's taste becomes vitiated, but nature's ever remains true to the model set by the greatest artist of them all—the Creator.

Now, if we take nature as the standard, must we not accept Guerin's opinion as the nearest right? He says flowing lines, richness of detail, and lustrous surface—commonly called chemical effect—approach nearer the divine plan than the crude fuzziness, the deadly flatness, and harsh contrast of the so-called new style, but which is nothing on earth other than an attempt to cover up incapacity and ignorance by an attempt to revert to the earlier dark ages, in imitation of the old masters, who are only masters because, considering the times in which they lived and their limited facilities, they accomplished wonderful things for their age.

E. M. Estabrook, Elizabeth, N. J.

4. CONSERVATIVELY PROGRESSIVE.

I am inclined to be conservative in business matters, and don't like to rush into anything different from my way of working, unless I can see a decided improvement. While I try to advance in the art of posing and lighting in each and every sitting, I can see no good reason for forcing out all knowledge of refined drawing and lighting, and giving my patrons crude, careless work, telling them "this is the modern portrait!" They would then say we are no better than the amateur.

Who can see the work of Mr. Steffens, of Chicago, and not admire it? Each sitter looks refined and cultured (and they could be made to look like freaks, if a freak found the point of view and managed the light), the lines beautifully

[1] The reference is to F. W. Guerin's letter protesting against "freak" portraiture, addressed to the fraternity just before the last Celoron Convention.—ED. W. P. M.

balanced—really a poem. All this because of real art knowledge.

I have in mind a child portrait by B. J. Falk, New York. In this can be seen the sweet, refined, and cultured child (not a grinning, silly youngster), which shows the artist knew what he wanted.

I find that the people (I now speak of wealthy people) are inclined to advance with the photographer if he shows them at their best. By taking great care with each patron, making several sittings, and charging a good price, success is sure.

We must realize that the lens is only one eye, and sees things with not so much breadth as the two eyes of a person, but is correct in drawing if skilfully handled. While the painter can make his lines broad, giving depth and atmosphere in his work, no painter can draw so correctly as the photographic lens.

The old-fashioned photographer (I do not include all by any means) seemed determined to transform all his sitters into rubbernecks. Among the negatives that I possess, made by that master, J. Landy, I find many which contain the simple, quiet poses, perfectly balanced lines, and each sitter imbued with a certain grand manner.

Anyone can make a picture of an old man, but show me a beautiful portrait of a handsome woman, and I will show you an artist.

F. M. Somers, Cincinnati.

5. A PLEA FOR THE "NEW" METHOD.

Looking at new *vs.* old methods in portraiture from a business stand-point, it would be hard to say which of the two offers the most advantage, some men having great success with one, others at the other. While the old-fashioned, plain, straightforward photography seems to meet the taste of the general public, it is still a question whether the modern method (so-called "freak photography") has not its benefits in dealing with patrons of the cultured class. I find that this so-called "freak photography" is of great benefit to me; Hollinger, Appleton and others undoubtedly find it the same. There are cases where the so-called "freak photography" is wanted. I am satisfied, however, that "freak photography" is not necessarily "artistic photography." We should not confuse the two. The word "freak" means to do something to imitate; but, instead of succeeding, you meet with unsatisfactory results to yourself and to your admirers. "Artistic photography," however, is modern photography from an artistic point of view—*i. e.*, correct lines, proper lighting, and characteristic feeling. At the present time photography has come to a stand-point where individuality must present itself in the photographer's work. It then does not matter if it is called "freak photography" or "artistic photography." The truth remains the same: one way may be artistic, the other may not. No one can dispute the artistic quality of the work done by some of our modern photographers. Their pictures may seem very plain and unpretentious in finish; but when you stop and study them a little, you will find there is not only a suitable surface finish, but also a picture which speaks the characteristics of the subject in each case.

Nowadays, when you can buy dry plates with the developing formulas and papers with full instructions, any amateur can turn out a finely finished photograph. The professional photographer is looking beyond that; is trying to learn from the masters in art, such as Rembrandt, Van Dyck, etc. Now, then, the question arises, if we try to get the quality in our work which distinguishes the work of Rembrandt, Van Dyck and such artists, why should we be called "freak photographers," for we study photography from an artistic stand-point, guided by these renowned artists; while, on the other hand, photographers who turn out nice, pleasing work, smoothly finished, either never study art or despise the masters; hence, the result is photography simply.

Is it just to condemn a man's work because we don't understand his style of handling it? While it is true that the camera can never do all that a painter can with a brush, it is nevertheless certain that if the photographer is an artist he can accomplish more with a camera than one who is not. One man will photograph a subject, and the picture will lack character and personality; another man, an artist, will photograph the same subject, and his picture of the subject will be characteristic, and we get a true portrait. Now, which is the artist—the one who makes the subject look like a corpse, or

the one who gives us the subject as he is in life? All this can be done with the camera. In my opinion he is an artist who portrays his subject with his or her individuality as apparent in the picture as when we see the subject in daily intercourse.

I find in my business that that kind of photography which is entirely different from the old style is the work which is in demand. That style of picture commands better prices and brings me a better class of trade. The intelligent public is not looking for smoothly finished photographs, but for pictures which are individual in style and originality. It is only by this style and method of photography that one can build up a business to-day. The time is past when you can hire an operator and place him in a studio to do your operating and conduct your business. The customer enters your studio with a definite feeling that he wants your individual taste in his portrait, and not that of your operator. Your operator may be a very fine workman, but it is your individuality which must show in your pictures, and which your customers are after. Mr. Hollinger, of New York, has most successfully followed this method. He has the true style of photography; no retouching according to the old style, no lavishly painted background, but a picture of the subject with its characteristics. That is what is wanted.

Ten years ago a photograph could not be too highly finished. Your customer entered y our studio at that time for phographs. The times have changed. At present customers come into your studio for pictures, for lasting pictures, which are to be framed and hung on walls—not to be shoved in an album and laid aside, or placed on a shelf until soiled, and at last thrown into the fire.

Within a short time you will find a perceptible change in the method of taking orders at your studio. Thousands of dollars' worth of stock is cast aside in every studio yearly by showing proofs from unfinished negatives. This is a detriment to any business, as the customer in looking at an unfinished picture becomes disgusted with its defects and difference from what he expects in the finished print. The customer takes the proof home in disgust, sometimes thinking of never entering your studio again, and perhaps even goes into another studio without seeing you. Why not do away with a method which is so detrimental to your business interests? In my opinion the time has come when you can profitably make five to ten negatives, pick out the best two or more, finish one of each in platinum or any other finish, and within a few days show a finished picture to your customer. Should they not prove satisfactory, cast them away and make new ones; but remember you have the goodwill of your patrons and not the disgust. Charge for each satisfactorily finished negative and picture, we will say, $3.50 to $5.00, and for each picture after that, ordered from that negative, $1.00 to $3.00 up to cabinet size. This is, in my estimation, a good price for the work, and nine times out of ten you are the gainer by selling more prints from more negatives. You have more money at the end, and the customer leaves your studio satisfied. This, in my idea, is the best method in which the professional photographer can conduct his business.

Remember that individuality must show in your work; it matters not if you are called "freak photographer," or "artistic modern photographer," or simply a "photographer," you will get the better prices by this method. Your competitors will look upon you as the leader. Why? Simply because you are doing different work from theirs and getting more business. They envy you, and that is where the difference of opinion lies.

A short time ago I saw work done by many different photographers in the United States, and finished in different manners and shapes. I have seen some attempts which resulted in a picture which almost was no picture at all. The face cast into the strongest kind of light, no outline or shadow, in fact no outline at all of the subject, but merely the face standing out from the background, hair and drapery sunk in dense shadow, nothing visible except the face. That is what I would call "freak photography." It is my opinion that no head portrait should show a sharp outline or drapery which attracts the eye at first glance, but there should always be a suggestive outline. The old style of portraiture requires the best kind of lens, stopped away down to cut as sharply as possible, so that every hair in the head and every shadow in the

drapery can be seen. But that is not artistic. It may please the majority of people, but there are always some of better taste who would not have or accept such style of portrait—retouched to death, likeness taken out of the face, etc. Where is the characteristic of the individual? Nowhere, because the photographer has worked it out. That style of work is, happily, largely a thing of the past. If any photographer has the "old" method in use in his studio, he should try the "new," and see the difference. Of course, he must have the ability of explaining to his customers the difference; he must know what he is talking about to convince his customer; he must have samples of work from which he can explain, in order to be successful.

This is my view of present-day photography. I find it quite a success in my studio. No prints are made but platinum and carbons. The bichromate of gum process I could never get satisfactory results from, but my "velvet art process" (which is entirely different from the bichromate of gum process) gives prints which sell easily and at very good prices. It will be remembered that my exhibits at the convention of 1898 at Celoron, which took the gold medal, were made by that process.

To succeed in your business let people know that your work is good and up to date, and when your competitors come down in price, advance yours, and they, as well as your patrons, will think the more of you, and your success is all the more certain.

J. E. Mock, Rochester, N. Y.

6. THE CHEAP MAN'S DECADENCE.

It is evident that the highly artificial style in photography of twenty years ago is gradually being superseded by one of more artistic character and dignity. This has been encouraged not only by the great laws of discovery and progress, but by the fact that the general average of the public is demanding a higher standard. A more systematic education in art is being introduced in our schools; reproductions from old and modern painters are now scattered broadcast over the land; exhibitions by amateurs have deluged the country, and are becoming more and more valuable, until the use of the words "amateur" and "professional" should be reversed.

With all this spirit abroad, it is high time that the cheap man should awake to the fact that rapidly and surely his business is being undermined. That there will always be a place for him at a bread-and-butter rate may be true; but the tendency of the times is to compel him to buy cheaper bread and less butter, until, as a result of his carelessness and lack of energy, the public having grown away from him and left him behind, the veil of obscurity shall be drawn around him, and "the place that knew him shall know him no more."

I contend that there is no excuse for any man's deliberately establishing himself for the demoralizing purpose of supplying cheap work to the public, assuming a fixed position, and staying there; the fact is, he does not stay there, for by his lax ways he deteriorates, and in his descent drags others with him.

All honor, then, to the ambitious amateur, the man who appreciates the charm of individuality, and inspires his work with the winning, uplifting eloquence of ideality; who is fresh with the zest and movement of the times, and feels the fact that in the province of art he should deal with high principles! To such a one the present is full of promise.

Herbert Randall, New Haven.

7. GIVE THE PUBLIC WHAT IT WANTS.

The old saying that experience is the best teacher is very applicable to this question of old *versus* new methods in portraiture. I have observed the experience of others in this particular, and taken the lesson to myself. It pays to give people what they like and want. Several photographers worship along the lines of Hollinger, and others of that school have found this out. Not that I condemn Mr. Hollinger or his work, but the general public (outside of New York) is not yet educated to *like* that sort of work, and the man who attempts to force the public taste along that line may find that it will spell ruin.

And often, when you radically change your style, before you are certain of just what you are aiming at, your work shows the uncertainty, you fall behind in work-

manship, and your trade is "lost in the shuffle." People go elsewhere, where they are reasonably sure to get what they seek without disheartening experiment. The average man and woman want what he or she likes, whether it quite fits the photographer's fancy or not. I speak from a general point of view and as far as the business end of the question is concerned.

A lady in my studio a few days ago said that she had had a portrait made at one of the "new" studios in New York. She brought the picture for me to see, being very much dissatisfied with it. The picture was good in its own peculiar way, but not what she wanted. *Moral:* Give the plain public what it wants, not "something which looks like something else."

Louis F. Jansen, Buffalo, N. Y.

I have no doubt that there is in the present-day portrait work a great deal that might be called "freak photography," but it certainly cannot bear any relation to the work that is made by Hollinger, Appleton, and Pierce, which is most decidedly artistic. Photography is photography. Artists are in the photographic business nowadays who handle the camera as a canvas and brush. The good photographer who is an artist is the one to follow. There are a great many photographers who make beautiful effects in posing and lighting, but it may be a question whether their work is artistically correct.

The one man makes the picture as he reads his subject, and brings out by the manipulation of light and pose the character of the sitter. He may see something in a very plain woman before he ever attempts to pose her; that picture is already made (mentally); he goes to work and produces it. It may not be what a photographer would like to see, but the artist is in it as well as the subject, and there is something very pleasing and attractive about it; it will bear studying. The photographer goes to work to please the public universally. There are all kinds of people to suit; he splits the art of it, takes half, and put in a few tricks to balance it up, shakes them well, and very often ends in a very beautiful photograph. Sometimes it pleases, sometimes it fails, but the people generally are getting to be critical, and you must get away from photography to made an individual success and put individuality into your work. Portray your subjects as you see them. Don't say, "I'll make a negative of this man as I made of so-and-so." A few words of conversation will bring out some point to work on. Of course, we are often rushed, and to enthuse over every sitter in a big day's work is exhausting, to say the least, but it counts to do the best you can, and shows in the end. As Joseph Jefferson said to me one day: "Your business is a great deal like mine in one respect: our best results are often accidents, but we have to work up to them." Don't call it "freak photography;" it is using light, shade, and subject naturally.

W. C. Farrand (Pach Bros.), New York.

A TIMELY SUGGESTION.

BY H. C. STIEFEL, PH.D.

LAST December the Managers of the Carnegie Museum, of Pittsburg, Pa., gave a series of prizes to the school children of that city for the best essays upon articles or groups of articles on exhibition in the museum.

One of my boys went out to make a preliminary study for an essay; he came back with his head full of stuffed camels, mummies, steel rails, milk bottles, flamingoes, Indians, cuneiform inscriptions, and a whole lot of other things, metaphorically speaking. He found almost all trades, arts, and sciences represented in some way or other in the displays.

"But your hobby-horse ain't out there," said he to me, "photography ain't in it. All the other trades in Pittsburg are represented in some way or with some products, but not photography."

Later on I saw that the boy was right, and that some photographer of Pittsburg was missing an excellent opportunity to get an exceedingly good advertisement at a comparatively small cost.

Let the enterprising photographer get a suitable upright or flat case and place a history of the development of photography in it. This can be done without great cost. Start out with a few daguerreotypes

and then come on down to the present time with its rapid plates and papers. Put in samples of matt and glossy prints, collodion and platinum; put in a few prints showing how retouching affects the work; place an old-time print beside a later day snap-shot. Take one of those five-minute exposure things that looks as if the poor sitter had been pounded out of a piece of putty, one with as much expression in the face of the subject as there is in that of a stuffed codfish; place this beside one of your best newer prints—one of those laughing, happy faces, one with speaking eyes, eyes in which you can read "Oh, you jollier," as plainly as on a printed page. Mark them "old" and "new," or "1839–1899," or something similar.

But it is not necessary to go further into detail—any photographer with a proper knowledge of his art can fill out an interesting case. Such a case would be seen and studied by the public; every half year or so the newest photographs could be replaced by newer ones and thus kept up to date.

At present almost every large town has a museum, lyceum, athenæum, library, or some similar institution where such a case could be put up and called welcome.

EXECUTIVE MEETING OF THE P. A. OF A. AND PRIZE LIST FOR 1900.

A MEETING of the Executive Committee P. A. of A. was held at Milwaukee, Wis., January 8th, President Stein in the chair and all the members of the Executive Board present.

The reports of the Secretary and Treasurer were read, showing a balance of cash on hand $1201.43. The Audit Committee reported them correct. Treasurer Frank W. Barrows presented his bond, which was accepted. The 1900 convention was then appointed to be held at the Milwaukee Industrial Exposition Building, July 23 to 27, inclusive.

The preparation of the prize list and arrangements for the exhibition were then taken up. It was moved and seconded that the divisions be abolished. Carried. The following was unanimously adopted:

EXHIBITION.

The purpose of this exhibition is to show only such pictures produced by photography as may give distinct evidence of individual artistic feeling and execution.

From the pictures submitted for exhibition a selection will be made by an examining board, and pictures will be hung as in the opinion of the board are within the scope of the exhibition as expressed above. Each exhibitor will be furnished with a certificate of acceptance of his work. No picture, whether accepted or not, can be removed before the close of the exhibition.

CLASSES AND AWARDS.

Grand Portrait Class. Six pictures, sixteen inches or larger. First award, selected; second award, gold medal; third award, silver medal; fourth award, bronze medal; fifth award, diploma.

Genre Class. Three pictures, sixteen inches or larger; subject to be chosen by the photographer, the title to be appropriately inscribed on the picture. First award, selected; second award, gold medal; third award, silver medal; fourth award, bronze medal; fifth award, diploma.

Miniature Class. Eighteen pictures, the largest dimension not to exceed four inches; all to be grouped in one frame. First award, gold medal; second award, silver medal; third award, bronze medal; fourth award, diploma.

Class A. Twelve pictures, thirteen inches or larger. First award, gold medal; second award, silver medal; third award, bronze medal; fourth award, diploma.

Class B. Twelve pictures, the largest dimension to be nine inches. First award, silver medal; second award, bronze medal third award, diploma.

Class C. Twelve pictures, the largest dimension to be six inches, all to be framed in one frame. First award, silver medal; second award, bronze medal; third award, diploma.

Landscape Class. Nine pictures, any dimension. First award, silver medal;

second award, bronze medal; third award, diploma.

Marine Class. Nine pictures, any dimension. First award, silver medal; second award, bronze medal; third award, diploma.

Foreign Class. Best collection of photographs of any size, framed or unframed, to be delivered to the Association free of charge. First award, silver medal; second award, bronze medal; third award, diploma.

RULES AND REGULATIONS.

1. No exhibitor can enter more than two classes. 2. All competitors must be members of the Association, except the foreign class. 3. When one dimension of picture is given, it applies to the entire length or breadth of the picture in all cases. This rule applies to the size of the print, not the mount. 4. All exhibits must be framed. 5. The Association will not be responsible for any loss or damage to pictures in its charge, but will use all reasonable care to prevent such occurrence. 6. Applications for space in the art department will positively cease July 7th. Applications for space in this department must be made to George B. Sperry, First Vice-President, No. 319 Summit Street, Toledo, O. 7. All pictures submitted for exhibition must be addressed to George B. Sperry, First Vice-President, Milwaukee Industrial Exposition Building, Milwaukee, Wis., forwarded at owner's risk, charges prepaid, and delivered not later than July 14th. Pictures from abroad come under the same rule. 8. Exhibits for the manufacturers' and dealers' department to be shipped to J. George Nussbaumer, Secretary P. A. of A., Milwaukee Industrial Exposition Building, Milwaukee, Wis., charges prepaid, and must be placed in position by July 21st. 9. Have your box covers screwed instead of nailed. Your home address must be marked on the under side of cover for return of packages. The Association will not be responsible for packages not so marked. Put screw-eyes and picture wire for hanging in the box. 10. All boxes and packages will be accepted at any time previous to July 14th, so that photographers need not feel any uncertainty about the safety of their goods. No exhibits will be allowed to be removed from the hall until the close of the convention. 11. No manufacturer, dealer, or their representative, shall do business on the floor of the hall unless he or they rent floor space or desk room. 12. All exhibits will be entered under a number given them by the Vice-President, and shall not contain any name or markings that shall reveal the identity of the exhibitor. Exhibitor's name will be attached after awards are announced. 13. All entries for competition must be prints from negatives made since the last convention.

Moved and seconded that the prize list and rules and regulations be adopted as above. Carried.

Moved and seconded that the Secretary be instructed to write to Mr. C. M. Hayes, accepting his kind offer to send for exhibition foreign exhibits representing typical up-to-date photography of people, habitations and interesting sections of the country from all nations of the world, extending to him the thanks of the Executive Board. Carried.

Moved and seconded that we appoint an honorary Vice-President in each State to represent the Association in their State. Carried.

Various committees were appointed for the carrying through the work of the convention.

Moved and seconded that the Secretary be instructed to write to E. C. Eldridge, Curator of the Layton Art Gallery, accepting the kind invitation of the President and Trustees to visit the Art Gallery during the convention, also conveying the thanks of the Executive Committee. Carried.

A communication was received from the Photographers' Association of Wisconsin, stating that owing to the P. A. of A. accepting the invitation of the P. A. of Wisconsin to hold their twentieth annual convention at Milwaukee, the P. A. of Wisconsin will hold no convention in 1900, but will join heartily with the P. A. of A. in making the convention of 1900 the largest and most successful convention known in the history of photography.

There being no further business the meeting adjourned, subject to the call of the President.

J. GEORGE NUSSBAUMER,
Secretary P. A. of A.

BUFFALO, N. Y.

TINKERING WITH THE DEVELOPER.

In our last issue, says the editor of *Photography*, we published a letter from a correspondent, claiming that in cases of under-exposure, such as are bound to occur in hand-camera work, "tinkering with the developer" was of undoubted service. We said we should recur to the matter, the importance of which is unquestionable, and we hasten to fulfil our promise.

Let us preface our remarks by saying that what follows has reference especially to the average run of photographs, such as an amateur might take, say in the course of a trip in the country or to some interesting town. We mention this because there are cases where special conditions prevail, and while the principle would remain the same, the method of its application would be entirely different. We should like to add that until a fairly recent date we were fully convinced of the excellence of the old plan, but that our experience, especially during the last two or three years, has led to an entire alteration in our methods. It has been followed by a very great increase in the proportion of technically good negatives to plates exposed, and we are now firmly convinced, not only that it is the best plan, but that it is the only plan to secure the best possible negatives under varying conditions. Local development is, of course, also not under consideration.

It is necessary, first, to find out what developer is best suited to the plates employed. We do not mean particularly what reagent to use, whether pyro, amidol, metol, etc., because these are more a matter of the operator's taste and habits than of anything else. We mean what strength of solution can be used, and particularly to what degree the accelerator can be added and the restrainer reduced without fog. It is essential to know that the particular make of plate used can be kept in a developer composed of so much pyro, let us say, so much sodium sulphite, and sodium carbonate, at the usual temperature for a period long enough to fully develop the plate without fogging it. More! The developer should be so constituted that any serious increase in the accelerator *should* fog the plate.

The use of bromide we do not advise unless absolutely necessary, because most plates in the market will give perfectly clean results without any at all, and it certainly acts by undoing some of the light action.

Such a developer as we have described is what most photographers would use on a plate they knew to be under-exposed. It is the developer that is best calculated to bring out every trace of light action that is there, without affecting those parts where the light has not acted.

How about properly exposed plates? They certainly require the same developer, because no one goes to work and intentionally over-exposes and then restrain. There is no need for it whatever, and it simply neutralizes the advantage of having a fast plate at all. One might far better use a slow plate at once, and have its good qualities at one's disposal, than buy fast plates and virtually make them slow ones by such a process. If the developer does not fog, and we point this out as an essential, and if it brings out all the image there is to be brought out, it is at once the best developer both for under and correctly exposed plates.

We only have left the case of over-exposure. We grant that a more "presentable" negative can be made by modifying the developer we have hitherto been supposing to be in use, when it is applied to over-exposed plates, but it must not for a moment be imagined that by so doing the over-exposure is being "cured," and that the result will be as good as if the exposure had been correct. It has only been palliated. Over-exposure is in ninety-nine cases out of a hundred an ill that can be easily prevented, but never "cured."

Under-exposure, as our correspondent pointed out, is often unavoidable. The development we recommend is suited to it. Correct exposure is equally well suited to it. Over-exposure should be the rarest of errors, because easily preventable. If four seconds is too long, one second can generally be given; there is not often any mechanical or other difficulty in the way, though there is sometimes. The case is quite different from that of under-exposure, where we may have want of light or the necessities which a rapidly moving object entails.

Over-exposure is generally the result of not knowing the correct exposure to give, and this is the result of not using some form or other of exposure meter. We give it as our firm belief that any person of ordinary intelligence, after having taken up photography for a month or two, should have little or no difficulty in correctly gauging his exposures. What with carefully measured plates, and more than one excellent form of meter, the exposure bogy has been effectually laid, except under circumstances that seldom obtain.

We need hardly add that we are in no way concerned with the sale or otherwise of meters, our sole desire being to help our readers to the production of first-class negatives. Of the ease and certainty with which they can be obtained in this way we have almost daily proof.

The *idea* that the photographer has great power in development is responsible for carelessness in exposing. Especially is it so with over-exposing, because of the belief, true enough in its way, that it is better to err by giving too much than too little. It is better not to err at all. Let the worker find out how long he ought to give, and then either give it, or give as near to it as he can. Let him then develop his plate with a developer that will "bring everything out." Let him regard errors of exposure as irremediable, and he will then learn that they are also usually inexcusable.

To recur for a moment to our correspondent's letter, we would point out that while agreeing in what he says as regards the unavoidability of under-exposure, he is clearly not developing what he believes to be his correctly exposed plates properly. If he "tinkers with his developer" always and develops each plate exactly as he would if it were known to be under-exposed, he will find that he can get much more out of them than he at present does; in fact, he will think that they have increased in speed. Moreover, we are quite sure that if he gives the method we recommend a fair trial he will undergo the same conversion as ourselves, and will be as enthusiastic in its support as we are. More we cannot say.

OLD PROCESSES.

SEVERAL times in recent numbers of this MAGAZINE there have been suggestions that because processes were worked long ago they are not necessarily effete. In the carbon process, which has gradually climbed into great and deserved favor, we have an old process, and in the process so much lauded by a certain section of advanced workers—gum bichromate—we are simply touching the beginnings of carbon. Some time ago the *British Journal of Photography* commented editorially on this subject in speaking of an exhibition of historical work, and we quote a part of its remarks:

"Take, again, silver printing; has any advancement been made in that beyond the convenience of ready-sensitized papers? One may safely assert that the silver prints of to-day are certainly no improvement, in any way, on those of twenty or thirty years ago, while they may not be nearly so stable. Some shown in the exhibition, though thirty and forty years old, showed little, if any change; and that brings us to the point, Are modern papers capable of yielding such permanent results as those of old, or is the fading due to the workers who employ them? Thirty years ago silver prints were looked upon as being more or less unstable, but no satisfactory theory as to the cause was forthcoming. Is there now? and, if so, why is the fading not remedied; or modern prints made as permanent, at least, as those of, say, thirty years ago? We still have no more satisfactory method of restoring faded silver prints than we had in the sixties, though the silver that once formed the image is still in the paper, but only in an altered condition, for there is no reason to surmise that it has become volatilized. Take, again, ceramic photography; examples made in the very early sixties are not surpassed by any that are done now. When such matters as these are duly considered, it may be asked if the advancement in technical photography, during the latter half of its life, has really been so great as one might have imagined.

"Anent old processes and applications thereof—examples of all, however, were not shown—some new ideas may be obtained which may be useful now. Pouncey's carbon process is a case in point; so is

Taber's bas-relief portraiture. This latter form of portraiture was first introduced now more than thirty years ago, but nothing much was done with it at the time, excellent though the results were. Now they seem to be appreciated. Photo-sculpture, again, though very successful, was not much appreciated. The case might be different now. Eburneum pictures were very beautiful, though, except in the hands of the inventor, Mr. Burgess, and a few others, they were not a great success. Now they would be much more easily produced than then. In place of the gelatine and oxide of zinc being applied to a collodion positive, a similar result may be obtained by simply developing a carbon picture on ivory celluloid, or transferring one to it from a temporary support. Such pictures might meet with commercial success now.

"There are several defunct processes that might now be experimented, with or without modification. Here are a few ancient processes that were once used, though the names of them even will probably be quite new to modern photographers. For example, the ambrotype, the chrysotype, the cyanotype, the chromotype, the ferrotype or energiatype, catalysotype, fluorotype and others that are fully described in the earlier works on photography. Some of these might be reinvented, and new names found for them, as in the case of several other old methods."

Our attention is drawn to this matter at the present moment by receiving from one of our Western friends some lovely little "cameo" pictures. Cameo and statuesque portraits are certainly very old, but the idea was worked out independently in this case, and was thought to be entirely new. New the pictures were in that locality, and they are meeting with the success which a good novelty deserves.

KALLITYPE.

BY G. E. BROWN.

THE name of the extremely pretty—in more senses than one—process invented some ten years ago by Dr. W. W. J. Nicol was unfortunate in its resemblance to *calotype;* but the process is one which deserves to be better known; and it is better known in America under several modified titles. In principle it is similar to the ancient process of Herschel, known as *chrysotype*, but in method of working and in the results obtained, kallitype is very different from any iron printing process before it, platinotype alone excepted. It is, in fact, platinotype with a difference; the difference being the replacement of the platinum salt by the less expensive silver salt. In other words, in kallitype paper is coated with a mixture of a ferric salt—say ferric oxalate—and silver nitrate. When, on exposure to light, the ferric salt is reduced to ferrous salt there is, so to speak, a potential image. And the potential image is converted into an actual and, at the same time, very beautiful image, by treating the print with a solvent of ferrous oxalate, the solvents used in the kallitype process being borax, sodium acetate, Rochelle salt, and other salts.

The coating of the paper is simplicity itself, and the sensitizing solution can be applied to all sorts and conditions of supports, with the necessary qualification that no metallic particles or other mineral impurities, such as ultramarine, are present to give rise to the reduction of silver salt. Then, by a simple modification of the developer—the alteration of its content of potassium bichromate—strong prints can be obtained from weak and fogged negatives. The materials are extremely cheap, and the range of colors fairly great; at any rate, prints in cold engraving black through warm black to sepia can be obtained. So much by way of introduction. Let us now to matters practical.

A standard formula for the sensitizing solution, and one which has given me every satisfaction, is as follows:

Ferric Oxalate	. .	170 gm. or 75 gr.
Silver Nitrate	. .	70 " or 30 "
Distilled Water to	.	1000 c.c. or 1 oz.

In making up this solution, the only uncertain ingredient is the ferric oxalate. It can be bought, either in solution or in the solid state, from a large firm of chemical dealers such as Chas. Cooper & Co. The former is the most convenient, and where a 20 per cent. solution is used, 850 c.c.

(or 400 minims) should be measured out for the above formula, and the liquid made up to 1000 c.c. (or 1 oz.).

If the solid is used, proceed as follows: Place the oxalate in a stoppered bottle, add the water, and place in a saucepan of water. Gradually raise the water to nearly boiling, and shake till ferrous oxalate dissolves. Filter if not clear, and when cool add the silver nitrate. These operations should be performed in a dull light, such as is used for toning. The solution keeps indefinitely.

To Coat Paper. The paper is first cut to size, say to sheets twice the size of whole plate—certainly not less than whole plate—and a number of them pinned down to a board half an inch or so smaller all the way round than the paper. A little of the sensitizing solution is poured into a dish or saucer, a fine Turkish sponge saturated with it, and squeezed fairly dry. By giving broad strokes across the paper, afterward crossing these, it is easy to produce a coating very uniform and free from streaks. If very rough paper is being sensitized, use the sponge rather wetter, and mop the liquid well into the depressions of the paper. Drying is done very easily at a few feet from a clear fire, holding the sheet by the corners, or pinning it to a clean board. Gas or lamplight will not, in a reasonable time, affect the paper.

Exposure is rather shorter than with printing-out paper. The image appears faintly as bluish-brown on a yellow ground. It is best to back the paper during the printing with oilcloth or celluloid sheet, as damp makes it difficult to judge when exposure is complete. Under normal conditions the detail in the densest portions of the negatives should just be visible.

Development. A mixture of Rochelle salt and borax is the simplest; the more Rochelle salt, the warmer the color. Formula A is for black tones, B for purple, C for sepia:

A.—Borax . . .	100 gm.	or	45 gr.
Rochelle Salt .	75 "	or	30 "
Water . . .	1000 c.c.	or	1 oz.
Potassium Bichromate . . .	95.115 "	or	45.55 min.
(1 per cent solution.)			

B.—Borax . . .	30 gm.	or	45 gr.
Rochelle Salt .	100 "	or	10 "
Water . . .	1000 c.c.	or	1 oz.
Potassium Bichromate . . .	95.115 "	or	45.55 min.
(1 per cent. solution.)			

C.—Rochelle Salt .	50 gm.	or	25 gr.
Water . . .	1000 c.c.	or	1 oz.
Potassium Bichromate . . .	50.60 "	or	25.30 min.
(1 per cent. solution.)			

For flat and weak negatives and overexposed prints increase the bichromate solution. Immerse the prints face up in the developer, and smooth away any air-bubbles with a glass rod. Within a second or two the faintly visible image develops up to a vigorous print. The print must, however, be allowed to remain at least fifteen minutes (or better, half an hour) in the developer, which, besides "developing" the image, plays another *rôle*. This is to render the iron in the paper thoroughly soluble, and unprecipitable by ammonia. If this is not properly done, yellow stains and impermanent prints are the result, and, as the developer costs very little, it is a mistake to overwork it.

From the borax bath the prints go to the so-called "fixing" bath, a weak solution of ammonia:

Stronger Ammonia Water	15 c.c.	or	7 min.
Water	1000 "	or	1 oz.

They remain here ten minutes, being turned over at intervals, and then go to a second similar bath for the same time; after which they are washed in running water for a quarter of an hour, and dried.

Engraving black tones can be obtained by using a strong solution of sodium acetate as a developer. Take

Sodium Acetate . .	150 gm.	or	70 gr.
Water	1000 c.c.	or	1 oz.

As soon as the image has attained its full depth in this, transfer to a strong solution of potassium oxalate.

Potassium Oxalate .	180 gm.	or	86 gr.
Water	1000 c.c.	or	1 oz.

afterward fixing in ammonia solution as before.

A bath which has been recommended to give maroon tones is:

Rochelle Salt . .	100 gm.	or	45 gr.
Sodium Tungstate .	50 "	or	20 "
Water	1000 c.c.	or	1 oz.

but I have not myself used it.

Those who wish to experiment will find kallitype an extremely interesting and promising field. The color of the deposit is different with different salts, and by

using such salts as formates, meconates, etc., followed, if necessary, by a second bath of borax, there is a wide field for obtaining a variety of colors. Then by adding an oxalate to the sensitizing solution a paper is obtained which prints out in the frame. This, indeed, is part of the patent specification wherein the following formula is given:

Ferric Oxalate	150 gm.
Potassium Oxalate	30 "
Silver Nitrate	30 "
Water	1000 c.c.

The prints are fixed in:

Sodium Citrate	30 gm.
Citric Acid	5 "
Water	1000 c.c.

Kallitype prints also lend themselves to the numerous substitution processes well known in application to bromide prints. The possibility of applying these to tricolor printing—sensitizing, developing, toning, and resensitizing—will occur to many readers with a taste for investigation, and even though the work may be difficult, there is a sense of satisfaction in attempting something out of the usual path which is at once reward and stimulation.—*The London Amateur Photographer.*

THE PENNSYLVANIA CONVENTION.

A LETTER just received from President Schriever, of the Photographers' Association of Pennsylvania, says:

"Now that the rush of holiday work is over this is a good time to prepare for our exhibit for the forthcoming convention of our Association at Pittsburg. The date of the convention, May 1st to 4th inclusive, falls during the dull season, before the photographer takes up school work, and we expect a big attendance.

"Much care and thought have been given to the prize list, and we believe that it will be found to be acceptable to all. Realizing that some photographers believe in prizes, while others do not, we have created a special *Salon Class*. Reference to the convention rules will show that you need not enter in any special class in order to be eligible for Salon honors. All exhibits, even those sent complimentary, will be judged for their artistic excellence; and if there is one picture in the entire exhibit which deserves the honor, it will be given due recognition. The Prize List and full particulars can be had on application to Secretary D. Rosser, 347 Fifth Ave., Pittsburg.

"The convention will be held on four days instead of three as in past years. The programme is large and attractive; we will have the best artists with us to lecture and criticise. There will also be demonstrations under the skylight, and public criticisms of all exhibits. Competent critics will go through the hall each day and criticise the different pictures, and we will gather together from the various exhibits a collection of pictures which will be criticised, first, by an artist, from the artist's standpoint, and then by one of our most reputable photographers, from a photographic point of view. These criticisms will be of very great practical benefit to all who hear them.

"We want your support, your personal attendance at the meeting, and an exhibit for competition or complimentary. Remember that, meeting as we do in a large city, an exhibit of your work will prove a good advertisement, the newspapers will publish all the exhibitors, and your patrons will look for your name and record among the list of the best photographers of the State. Bring your wife with you.

"The Committee on Entertainment has prepared an attractive programme of social events, and you will have plenty of enjoyment.

"We expect special rates on all railroads entering Pittsburg, and it will greatly aid us if you will at once notify the Treasurer, W. I. Goldman, Reading, Pa., of your intention to be with us, sending him your annual dues. In return you will get your membership card and full particulars of all features.

"Yours fraternally,

"J. B. SCHRIEVER."

We urge the photographers of Pennsylvania to rally to the support of their Association. It is, or should be, their most profitable opportunity for growth in 1900.

HOME-made flash sheets may be made by taking two sheets of paper, coating them with starch paste and dusting powdered magnesium over them. Press the pasted sides firmly together. Next similarly paste two more sheets and dust them with powdered chlorate of potash, and paste these, one on each side of the double sheet containing the magnesium. The paper is convenient for handling, and the amount of light can be regulated by using a larger or smaller sheet.

A Protecting Varnish for Brasswork. In a recent lecture before the London Society of Arts the question of really waterproof varnish was discussed. The lecturer pointed out that the varnish used by the old masters was absolutely damp-proof, but that the kind used by the moderns was not absolutely so. He concluded that damp was the cause of faded pictures, and he endeavored to find a damp-proof varnish. As he found that such a varnish was not commercially obtainable, he set to work to discover the best way to make one himself. He found that the damp penetrated through minute pores or holes in the varnish, and the problem that presented itself was how to prevent these pores forming. His method of testing was to dehydrate some cupric sulphate, which then lost its blue color and became white; this he mixed with the varnish to be tested and then painted a glass slip with the compound. If water gained access through the varnish it was absorbed by the copper salt, which again became blue; but if it retained its whiteness it was non-porous. A large number of varnishes were tried, but none answered the test till he added Venice turpentine. Then the secret was discovered. A very small quantity of this substance added to the varnish conferred the property of impenetrability to moisture. The writer suggests that, if added to lacquer, it might still further add to its value and render it damp-proof. It is well known that, although a lens mounting, for instance, will keep intact under ordinary conditions, the time comes when, if it be exposed to damp, or more especially to chemical fumes, the varnish or lacquer is penetrated, and the instrument becomes rusty-looking and pitted through corrosion of the brass. Again, if the addition answered in one case it ought to do so in another; and the one fault of shellac varnish, its easy penetrability to water which has obtained accidental access to it, might be removed. Unfortunately, Venice turpentine is not always genuine, and this must be remembered if purchasing from a druggist.

C. H. BOTHAMLEY gives the following formula for ortol:

No. 1.

Ortol	15 parts.
Metabisulphite of potash	7½ parts.
Water	1000 parts.

No. 2.

Carbonate of Soda	2 parts.
Sulphite of Soda	1 part.
Water	10 parts.

The developer acts like pyro, but is much quicker; the character of the negative is the same, but the image is not so brown, so development should be carried a little further.

Two parts of a saturated solution of oxalate of potash, mixed with one part of water, and rendered slightly acid with acetic acid, is good for cleaning stained bromide prints. If the paper has been long stained, an immersion for a couple of hours, or even longer, may be necessary.

A GOOD metol developer is metol, one dram; water, eight ounces. When dissolved add sulphite of soda, one ounce; potassium bromide, eight grains; potassium carbonate, three drachms. For use take one part of developer and three parts of water.

WE join our British contemporaries in congratulations to Captain Abney on his promotion in the Order of the Bath, which was one of the New Year's Day honors. He became K.C.B., and we are sure that photographers all the world over will join in felicitating the most distinguished of their number on the well-deserved honor that has been conferred upon him. *Apropos* of Sir W. de W. Abney's recent assumption of the principal direc-

torate of science at South Kensington, a writer in the *English Mechanic* has the following eulogistic remarks: "Most happily for the nation, and for the dignity and purity of science generally, Sir John Donnelly is succeeded by as honorable and high-minded an English gentleman as himself. I mean, of course, Captain Abney, who may be most thoroughly trusted not to connive at the low arts and wiles of some of those whom he has been appointed to supervise."

In the Wrong Place. A thing in the wrong place is a nuisance. A layer of dirt in the house is in its wrong place, but it may be the salvation—pictorially—of some building; but then it is not dirt, but rather the mellowing influence of time. Flowers in the wrong place are simply weeds, and chemicals in the wrong place spell disaster.

We do not realize until we come to use some colored solution how difficult it is to cleanse glass. Glass is considered as among the easiest of substances to clean, and yet a film of color will often settle on our graduate measure or in our bottles that we cannot move. In preparing glass for some processess, as for coating with emulsion, even a good wash with soap and warm water will not be enough; it requires to be soaked in a solution of potassium bichromate and sulphuric acid in water.

But the worst enemy of all is hypo. It is a well-known rule that if a dish has been once used for hypo it must never, never be used for anything else. If a dish has had hypo in it and has to be used for something else, it should be soaked in a solution of sal soda, both strong and warm. Then wash it just as thoroughly as possible, and leave it to soak in changes of water.

If developer has stained glass or porcelain, a dilute acid (sulphuric is best) will generally remove it, and acid will fetch iron-stains from the glasses. But as prevention is better than cure, all iron solutions should be kept slightly acid, and this will largely prevent the staining. If the iron-stain is on paper, wet the stain and then rub it with acid oxalate of potash; but if the paper is not worth much, best destroy it.

Fortunately, the most important chemical of all (water) is easily cleaned. Water is very seldom pure, but if it is boiled it is generally pure enough for photographic purposes.

The British Journal of Photography thus describes the P. A. of A's diploma: "A graceful half-draped figure is holding a crown of laurel over the head of a kneeling young man in tourists' garb. There is, apparently, a bit of Moorish architecture in the background, and surrounding the certificate there are the seal, a camèra, printing frames, pestle and mortar, dishes, graduates, and so forth, while at the right hand side of the picture some winged, cherub-looking young persons are floating about, amidst a shower of mounted prints."

ENGLISH photographers are in arms against a proposed amendment to their copyright laws, which will remove many of the privileges which photographers now enjoy. They have an advantage over there, for whenever "the fight is on" the photographers show a solid front, and they *work.*

ORTOL is winning golden opinions. In a recent discussion it was stated that though ortol cost more than pyro, it did six times the work, and so was really cheaper in the end. Ortol comes nearest to equalling pyro of any of the new developers, and it does not stain the fingers.

Temperature in Development.—One of the most important factors in developing is temperature. The chemical activity of any developer will be increased greatly by a comparatively small increase in temperature, the reverse taking place by decreasing it. In summer time keep your developer cool. Put some ice around the developing tray, or put the bottle of developer in running water for thirty minutes before using it, or, better still, keep it in the ice-box all the time. In winter it may be necessary to warm the solutions. We cannot sufficiently emphasize the importance of a temperature, while developing, of not less than 60° and never more than 70° F.—*Tolidol Talks.*

PHOTOGRAPHERS throughout Ohio and the Middle West are advancing their prices to meet the advance in price of material

SPRINGTIME

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AN ADDRESS BY PIRIE MACDONALD.

MR. PIRIE MACDONALD, of Albany, N. Y., is a man with the habit of doing things and saying things in a peculiarly happy fashion which is all his own. Some time ago he gave a little exhibition of portraits before the Historical and Art Society of this city. The collection did not include any of his own work, but comprised selected examples by some of the best workers of to-day. In introducing the collection Mr. MacDonald made an address on the changes which have taken place in portraiture. From this address we make a few extracts which the craft may be glad to see. They fall right into line with the discussion of "Old *versus* New" inaugurated on other pages of this issue.

After speaking of the earlier days in photography, when the chemistry of the art demanded and received the largest part of the photographer's attention, Mr. MacDonald went on to say:

The new order of things has given an opportunity to men who are constituted differently.

Now that the bonds are loosened and the mechanical part of the work is a secondary consideration, some rather curious changes have taken place. Men with sympathies in certain lines are able to gratify their notions.

Men with certain artistical proclivities can spend their energies toward the fulfilment of their dreams without the distractions of mechanical problems.

How much time and labor would be lost and how many of the better moments would be wasted and opportunities thrown away if a painter had to discover and grind his own colors.

How the chemical problems chilled the artistic enthusiasm of photographers, only those who have had to go through the mill know . . . . . .

Photography is recognized as a medium wherewith an artist may express himself, and not merely a mechanic's tool.

Men with talent—men prepared to spend their lives in photography because they believe that there is a work to be done that is worthy of their devotion and their enthusiasm, and that there is sufficient opportunity for the artistic growth to warrant the expenditure of their best efforts, devotion, and enthusiasm, are attracted by photography.

The younger generations are not artisans; they are students of art—students of men and women—students of character

By D. D. Spellman.

as well as men who can make pleasing combinations of line and texture. Not makers of maps of faces, showing the location of a nose or a mouth as related to a pair of eyes; not men content to picture an empty shell, but rather to show the

strength and power, the justice, and truth, and manliness of a man; and the grace and purity, sweetness and womanliness of a woman.

Dyspeptics and people with refractory livers say flatterers. Those who recognize the seriousness of the work say discoverers of the beautiful—beauty of line and beauty of spirit.

The wart on a man's nose is of no more consequence than the wart of bad temper that his character wears, and they are equally to be evaded.

The purity of a woman's mind has as much right to be selected for a place in the portrait as the purity of her profile.

There is no more necessity for the perpetuation of a bad trait than for that of a bad feature—if there is a good one to take its place.

Pictures of people are made for the purpose of stimulating the memory; and is it

By M. R. F. McCarthy, Binghamton, N. Y.

not better to remember that which was good in your friends — that which was

strong and noble, that which you have admired and loved in them—rather than what you have had to condone?

Sometimes people say: "But we want natural pictures?" The bray of an ass is a combination of sounds and is natural. Chopin's music is also a combination of sounds, and is art.

Emerson says that art is the materialization of a conception. Which means that if a man conceives an idea, and then works out the materialization of it, he is an artist.

My distinction would be that a man who has never seen a tin cup, but who imagines such a thing, and following his idea makes a tin cup, is an artist to just the extent that his cup equals the one he conceived. On the other hand, the silversmith who is given a design to execute, or a silver cup to copy, no matter how elaborate, no matter how much skill it may take, nor how beautiful the result, is an artisan and not an artist.

This plan applies to sculpture and painting and music and photography.

These are the articles of faith of the men that I want to introduce to you through their work, which you will find on the walls of the gallery.

The few examples I have gathered together are not for the purpose of showing you what is *the* style of to-day, as one would speak of a lady's gown, for they are of as many styles as there are men represented.

Nor are they here to show you what is good and what is to be avoided, but rather to show you that the photography of to-day is a medium wherewith men who think can express themselves.

Not a process which casts every man into one mould, but one with which infinite variety can be obtained.

One sufficiently in hand so that the personal equation of the individual can be felt and recorded.

By Harry B. Shaw.

It is natural to remark that no two men have made pictures that are in anyway

alike, and I want that fact to prove my argument. Each man has shown you what he thinks and feels is beautiful. Each man shows the influence of his heredity and his training in what he thinks is beauty. And I am here to speak with the one contention that photography does permit of individual artistic expression—does give into the hands of the artist the power to express what he thinks seriously and honestly is the combination of truth and beauty.

Harry B. Shaw, *Washington, D. C.*

PORTRAITS.

This is a point that our friend, the portrait painter, has never admitted, but one that I believe to be true.

Mr. MacDonald is right. It is necessary not only that the photographer should seek the individuality of the sitter, but that he should recognize the easiest way to secure its expression and its appreciation when once expressed. It is this all-important detail which makes success in portraiture so difficult; so much depends upon the man, and so little upon the photographic process.

Few photographers realize, when they look with admiration on a fine head by this or that noted painter, how much study, observation, and hard work went to the preparation of the man before he could put his brush to canvas with such telling effect. It is the art that draws our admiration, not the mixing of the paints or their application; the interpretation of the subject by analysis and synthesis on the part of the artist, not his skill as a draughtsman or colorist. No manual can teach this, but the power may be gained by the education of the eye, by the observation of nature, and by a continual study of our subjects wherever we see them, in every possible pose and light, at home and abroad.

Only familiarity with life can enable us to make portraits having the illusion of life.

By M. R. F. McCarthy.

A PORTRAIT OF LOUIS PRANG.

THE remarks on page 7 of our January number upon the great sale of the pictures collected in Boston for many years by Louis Prang, Esq., together with the notes from various sources relating to the art enterprises of Mr. Prang, have doubtless awakened a desire to see the face of that great public benefactor. Mr. Prang having kindly favored us with a copy of his most recent photograph, we are enabled to fulfil this desire by presenting a reproduction of his photograph in this number. We can testify to its excellence as a likeness of an old friend, and we are sure he would not send out one he did not consider a work of art. It was taken by Ernest Zimmermann (Ritz studio).

Another unique art production has just been published by the Prang Educational Co. as a calendar for 1900. It is as pretty and as perfect in execution as a piece of Etruscan jewelry. It is in chromo-lithography; the predominant colors are blue, green, and gold. The pages are about 11 x 14 inches, and besides the calendar numbers for the month each page gives "examples of ornament reproduced from works of the great historic styles of decorative art, with extracts from the literature of the same nations and of the same historic periods." January is devoted to the Egyptian, February to the Assyrian, March to the Indian, and so on. By the close of the year we have splendid works from the choicest Greek, Roman, Persian, Japanese, Byzantine, Romanesque, Saracenic, Gothic

and Renaissance—all charmingly arranged and executed, giving much instruction to the art student and man of letters in very attractive shape, thus proving the truth of the old adage from Epictetus, which appears on the Roman page, as follows: "Everything has two handles;" and as said by Lucretius on the same page: "All things teach slowly, step by step, the advancing age!"

Ritz Art Studio, *Boston.*

LOUIS PRANG.

What a lot of delving it must have cost to produce such a work as this, and how much art is again indebted to Mr. Prang for his amazing interest in these matters.

Some newspaper slips we have received since our last issue speak further of Mr. Prang and his life-work, as follows:

Mrs. Dora Wheeler Keith, the winner of one of Mr. Prang's prizes of $2000 for, a Christmas card design, says: "Americans are fortunate in having their glowing sunsets with their marvellous combinations of tender lilacs, purple reds, and pale yellows. They should naturally love color, but I fancy that if they had not had the Christmas card as Mr. Prang presented it that they might still be unappreciative of color. Most persons go through life blindly until something is pointed out to them. A thing may be most obvious and they not see it. They may live with the most gorgeous sunsets all their lives and without noting the abundant color in the simplest objects, not demand color, not know the possibilities of color in anything but the sunset."

Mrs. Keith said, further, to her inter-

viewer: "I hope you will not omit to state that apart from Mr. Prang's achievements as an art publisher I have the highest regard for him as a man who has endeared himself to all artists who have been fortunate enough to know him. His kindly, gentle nature and broad liberality, his ready sympathy and devoted good-will to the young and struggling artist are qualities that few men possess, and I doubt if any to the extent that are attributable to Mr. Prang. I am delighted to know that his later labors in life, in bringing the standard of art education in our schools up to a higher level, and of disseminating a simple art knowledge have met with success."

Mr. John J. Ennekin, the artist, says: "The numerous enjoyable talks I have had with Mr. Prang on this whole subject in my studio are treasured up in my memory. They have stimulated me to endeavor to achieve something higher, and the question of selfish gain had never a part in these discussions. Whether the subject was art for the people or art education for the children in our public schools, he always wanted to do that which would do the most good for all concerned. As an art patron he has ever been liberal and encouraging, and many of these pictures which he is exhibiting are a proof of his excellent art judgment."

And so say we who knew him well.

PORTRAITS OF OLD PEOPLE.

WHETHER a man works by the old method or the new, the portraiture of old people is at once the most difficult and most fascinating test of his skill. The old leaders, Salomon, Mrs. Cameron, D. O. Hill, Rulufson, Kurtz, Gutekunst, Landy and others were all noted for their skill in this difficult branch, and we may gauge the possibilities of our younger portraitists by the ability they show in the delineation of age. Among the men of to-day—both the middle-aged and the young, those who are "coming men" and those who have firmly taken their place—we find the same thing. Some, such as Benjamin, are noted primarily for their fine work of this class; others who are not especially identified with the portrayal of age have made pictures of old people which live in the memories of those of us who see them at the conventions, in the photographers' own studios. A worker whose name will occur to all is Somers, whose fine character studies—for such they are—of old people worthily uphold the traditions of the studio in which they are produced.

Why is it so difficult to obtain satisfactory portraits of old people? There is so much in the subject which must be brought out in the portrait: the dignity of age, or its physical feebleness, and the prominent but often mobile lines of character which have been gradually emphasized during long years of life. The photographer is very likely to find among old people subjects of uncompromising

By D. D. Spellman.

stiffness unless he knows how to make his sitter unbend. Thomas Aquinas has told us of his first unaided attempt at an elderly couple. The proprietor of the studio in which his apprenticeship was spent was himself well on in years, and generally took personal charge of the old people who came to him for sittings, leaving the vignette subjects and the country people to the 'prentice hands. But it so happened that once, in his absence, there came an aged couple—man and wife—whose added years must have reached 150, and they desired to be photographed together. Putting a couple of plates into the holder, Aquinas attempted to pose his subjects after the conventional fashion. But their united rigidity appalled him. He had never before handled such concentrated stiffness. Leaving them to themselves, he retreated into the friendly shades of the dark-room. There, as he cooled himself, he remembered the only oral instruction touching the matter in hand: "Take the old people quietly."

By D. D. Spellman.

With this thought he ventured again into the studio. There had been a transformation. The old people had pulled their chairs together and were chatting with each other in the homeliest fashion imaginable. He saw his opportunity, focussed, watched for a pause in their conversation, and exposed carefully. The sitting was a success.

This stiffness in old people is often a stumbling block to the young photographer, but the advice to "take the old people quietly" is the key to the situation. We often hear men boast that they never pose their sitters. Like many statements, it has some truth and more error in it. They mean that they do not place their sitter in a conventional, predetermined position, but note—often instinctively and without conscious effort—the natural and characteristic attitude of the subject. This letting the sitter pose naturally is doubly emphasized in portraits of elderly people on account of the stiffness with which they brace themselves when before the camera. Among the younger men who have made their mark with portraiture of age none is better known nor more successful than Spellman. Our frontispiece this month is a characteristic example of his work. Every photographer who is in touch with what is being done, and every photographer who attended the last convention, will recognize the picture, widely known as "Spellman's Old Man." It is a subject full of lessons for the photographer—most of which lessons he will discover for himself, but a few may be profitably outlined here. Note the forward droop of the head, emphasized by the strong rounding of the shoulders—shoulders, by the way, which are duly subordinated, distinct in form, and yet blended with the background. The bal-

ance of the picture, the interest centred in the face, and nothing jarring or contesting. It shows clever handling. The hair, the whitest part of the paper, is full of delicate detail, and yet it does not overpower the face. And it is only when we think how easily that great mass of white hair might have dominated the picture that we realize how narrow a line sometimes divides success from failure. And this brings us to one of the cardinal rules of this class of photography.

Don't underexpose. The slightest under-exposure and resultant forcing is fatal. In old age we require the softness of full exposure, or we shall get hard lines. Notice how restrained the retouching is. One or two good "high lights" would have so easily been added — and have spoilt the picture.

Our illustrations include three further examples of Mr. Spellman's work. The excellent portrait of our old friend, Jex Bardwell, will be welcome to our readers. It is a happy rendering of the spirit of the subject. The two portraits of an old woman well emphasize the leaning of old age; the need of some strong support. Notice how well the same characteristics are held in the two pictures, although one is a full-length and the other a vigorous profile. We feel sure that they are portraits from life.

By D. D. Spellman.

JEX BARDWELL.

LETTERS TO JACK—AND THINGS OLD AND NEW.

II.

My Dear Jack: In dealing with "old" people it is wise to impress upon them the fact (and be sure *it is* fact) that *you know your business.* Do not pretend that you know it *all,* or that you learned it all yourself, but preserve a teachable disposition and squeeze information from the "old" chappies whenever you see a chance open. A *good* way to make a favorable impression upon them is to keep a good display of your *text-books* where they can be examined by your callers. A few months ago I was in the establishment of one of the leading photographers in New England, whose work and name have been well known to the readers of this Magazine for many years. There *in his skylight* was a shelf *laden* with photographic magazines and books. Among them was *Photographics, Quarter Century in Photography, Cyclopædic Photography* — large and well-bound books, whose very appearance compels the thought that (as I overheard an "old" man say) "if photographers require such noble books as these, photography must indeed be a great art, and not so easy to learn, after all." From that time on our friend arose in that old man's estimation. Said the old man, further, "You have to be a great deal smarter than I thought you did, and I am glad to

see you let your books be seen. It will help you." Books are great helps, Jack. Buy them plentifully and show 'em up.

When I was a very young editor an "old" man who wrote the very first article in my first issue (Dr. R. Shelton Mackenzie, then editor of *The Press*, Philadelphia) was kind enough to let me come and see him in his sanctum sometimes. He had many shelves of books there. One day I remarked: "You have a lot of fine books, Doctor." He answered: "Yes, and *I know what's in 'em.*" Doubtless you get the intended pointer from this, Jack. There is not only much in having a good environment of books, etc., but there is also much, *very* much, in the art of *seeing things* to their full value. This reminds me of a companion to the little German picture I used in my last letter to you. It is called "*Seeing Things.*" Here it is:

Loescher & Petsch, *Berlin.*
SEEING THINGS.

It is reproduced from a stereoscopic view.

I suppose the title of this little German gem will be read in one way by the "old," and in a different way by you youngsters, as follows: The "old man" will read it "*Seeing* things," while the youngster who is alongside would call it "Seeing *things*," when he is out in the lap of nature making examinations. He has evidently found a combination he cannot make out, and turns to the "old" man and his glasses for help. Wise youngster. There is so much *art* in seeing things, and there is a great difference in the way in which people see. The difference may be understood by applying to it the lines of a poet who seems to be following after Robert Louis Stevenson, and says as to seeing and doing properly:

> "It's plagued mean when people don't—
> A dam'd sight meaner when they won't."

In the December number of the *Century* magazine is a capital article by that great poet, seer, and naturalist, John Burroughs, on "*The Art of Seeing Things*," which I would like you to study if you can. I will merely quote a few lines from it. You should read it all. Mr. Burroughs says:

> "I do not purpose to attempt to tell my reader how to see things, but only to talk about the art of seeing things, as one might talk of any other art. One might discourse about the art of poetry, or of painting, or of oratory, without any hope of making his readers or hearers poets, or painters, or orators.
>
> "The science of anything may be taught or acquired by study; the art of it comes by practice or inspiration. The art of seeing things is not something that may be conveyed in rules and precepts; it is a matter vital in the eye and ear, yea, in the mind and soul, of which these are the organs. I have as little hope of being able to tell the reader how to see things as I would have in trying to tell him how to fall in love or to enjoy his dinner. Either he does or he does not, and that is about all there is of it. Some people seem born with eyes in their heads, and others with buttons or painted marbles, and no amount of science can make the one equal to the other in the art of seeing things. The great mass of mankind are, in this respect, like the rank and file of an army: they fire vaguely in the direction of the enemy, and if he is hit it is more a matter of chance than of accurate aim. But here and there is the keen-eyed observer; he is the sharpshooter, his eye selects and discriminates, and his purpose goes to the mark.

"Even the successful angler seems born, and not made; he appears to know instinctively the ways of trout. The secret is, no doubt, love of the sport. He puts something on his hook that attracts stronger than any essence or oil, namely, his heart. Love sharpens the eye, the ear, the touch; it quickens the feet, it steadies the hands; arms against the wet and the cold. What we love to do, that we do well. To know is not all; it is only half. To love is the other half."

Some day I will tell you of some more things seen in photographic workers which I do not like to see. Look out for yourself.

All of the great artists began with "seeing things" with care. For example, that wonderful old master, *Fra Angelico*, has been called one "in whose retina was painted angels and cherubims, from whose hands no Christ and the Virgin ever came without prayers and tears." What would you not have given for such eyes, and mind, and hands? Yet do not be discouraged if you have them not, dear Jackie; all great artists were not so gifted *at first*. When Giotto made his glorious fresco on the wall of the Campo Santo at Pisa, the arms of his saints were as rigid as tripod legs; the outlines of their bodies were sharp and angular, and *they were club-footed*, looking as if they could not stand quite steadily. You may laugh, but this is so—*I have seen them*. But, then, Giotto painted these only a few months after he had been serving as a shepherd boy on his papa's farm.

Ruskin tells us that "*The Stones of Venice*" were shaped by design, as the notes of a piece of music, or the parts of a discourse, where beauty and harmony are both expressed so as to give pure and intellectual pleasure." So *let* yourself be swayed as you work. If you do you are to be a great man in your beloved art.

You ask me a good many professional questions, but I may answer only a part of them now. 1. "What is the formula for a good old-fashioned pyro developer?"

Well, we used to employ

Pyrogallic Acid . . .	12 grains.
Citric Acid	8 "
Water	6 ounces.

A few drops of a forty-grain silver solution was added. The best workers, as a rule, preferred the iron developer as being "cleaner" for wet plates."

2. "How can I make an old daguerreotype best fitted for copying?"

A weak solution of cyanide of potassium applied to the plate, drying over a spirit-lamp or stove, will remove the fog and dirt, but will not affect the scratches and rubs. In copying, watch out for the reflection of the lens tube upon the plate.

3. "Are white dresses desirable?"

Now this you have probably already found out, you "young" artist. You know that while the face, arms, etc., should never appear as white as a white dress, they should yet be white enough for good effect. With a white dress you need to be very careful in lighting the whole combination. These are matters you need the "art of seeing things" well developed in you for.

Your last question, about "Bill Dooley's hens," can hardly be asked seriously. You know that fresh albumen is always desirable, and that you are justified in securing it, even "if Mr. Dooley is the loser of a hen or two found trespassing in your garden or on your front porch."

You will have to excuse me now, Jack, for I must close this and post it to the printer. Yours respectfully,

EDWARD L. WILSON.

THE SALON OF THE AMERICAN INSTITUTE.

THE *Salon* of the Photographical Section of the American Institute, held at New York during December, offered an unusually interesting exhibition from the professional point of view. The number of prints shown was about 330, of which almost half were sent by British and European exhibitors, and the proportion of professional work was larger than is usual at such exhibitions. The British section was organized by Mr. H. Snowden Ward, of London, who was exceptionally fortunate in securing a fairly representative collection of British professional work. This afforded an opportunity to compare the professional work of the two countries, and we were gratified to see that the photographers of our own country still hold

the lead in portraiture. Among the American professional exhibitors we noted Pirie MacDonald, W. B. Dyer, F. W. Birchall, A. Holden, Miss F. P. Johnston, Miss Ben Yusuf, Hy. H. Pierce, Misses Selby and Nixon, J. C. Strauss, Hy. Histed, and Geo. H. Van Norman. Great Britain was professionally represented by examples of work from W. Crooke, H. W. R. Child, F. H. Evans, W. Gill, F. Hollyer, Edgar G. Lee, H. S. Mendelssohn, Lydell Sawyer, John Stuart, and Alfred Werner.

The amateur work from abroad, as well as that sent by Americans, included many fine examples of pictorial photography, although the collection as a whole could not fairly be said to equal that seen at the Philadelphia *Salon* of the previous month.

A picture which attracted much attention was a large composition by H. P. Robinson, showing an old gray horse, "Dapple," with two or three figures—a roadside scene. It was clever in composition, but not attractive otherwise.

The collection of pictures by Rudolph Eickemeyer, Jr., although it contained nothing new, may also be mentioned as an exhibit which did honor to the maker. *The* picture of the exhibition, however,

By Miss Zaida Ben Yusuf, *New York.*

ELSIE LESLIE.

was a large gum bichromate of a woodland scene without figures. It was entitled "'Tis Not Solitude," and was sent by the Brothers Hofmeister, of Hamburg. As an example of pictorial photography this was equal to anything we have seen. It was printed in two colors, apparently, blue and green, upon a white paper support of rough texture. The little picture "Home Port," by Daniel F. Gay, Worcester, Mass., here reproduced, was another good example of the skilful handling of a homely subject to get pictorial effect.

Turning to the professional work, perhaps the best single picture exhibited was a portrait of H. Snowden Ward, by Hollyer, of London. Mendelssohn, also of London, sent half a dozen 11 x 14 portraits of prominent women of the British metropolis. These were printed on albumen, toned to a purple-brown, and were technically excellent, though poor in pictorial quality. In the portrayal of women our American portraitists undoubtedly leave their British co-workers far behind. This was plainly evident in the portraits shown by Strauss, MacDonald, Pierce, Histed, Mrs. Sears, Miss Johnston, and Miss Ben Yusuf. We reproduce a characteristic example by Miss Ben Yusuf, in

By Daniel F. Gay, Worcester, Mass.

HOME PORT.

which we see the individuality which marks her work.

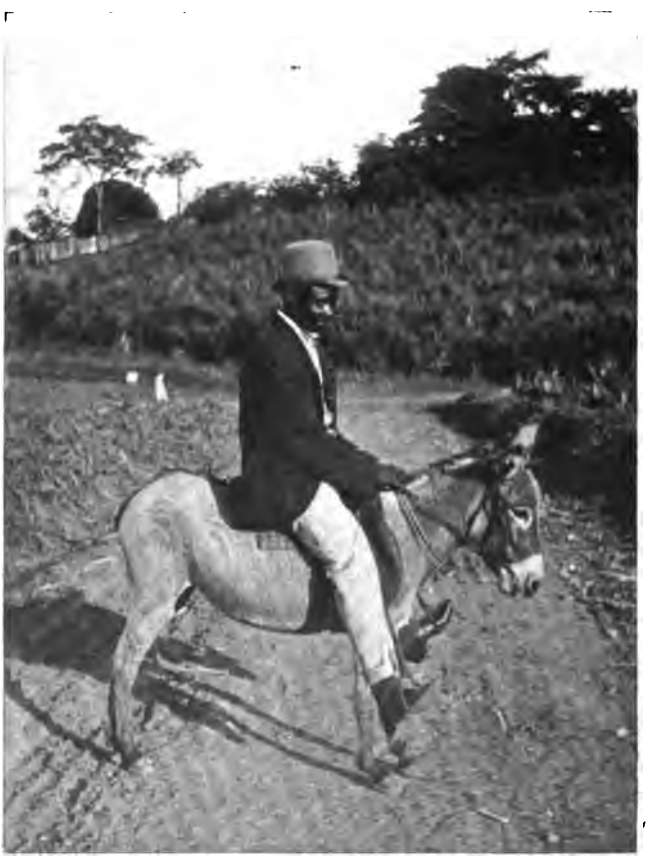
Among the portraits of men, those sent by Pierce, Van Norman, and Histed were peculiarly good, and exhibited pleasing originality in the treatment of the subject. A Boston amateur, Francis Watts Lee, also sent half a dozen portraits equal to the high average of the strictly professional work.

The management of the exhibition was in the hands of Dr. J. W. Bartlett, the Secretary of the Photographical Section of the institute, to whom much praise is due for the success of the affair, which was very largely attended.

HOW TO MAKE THE IDLE CAMERAS PAY.

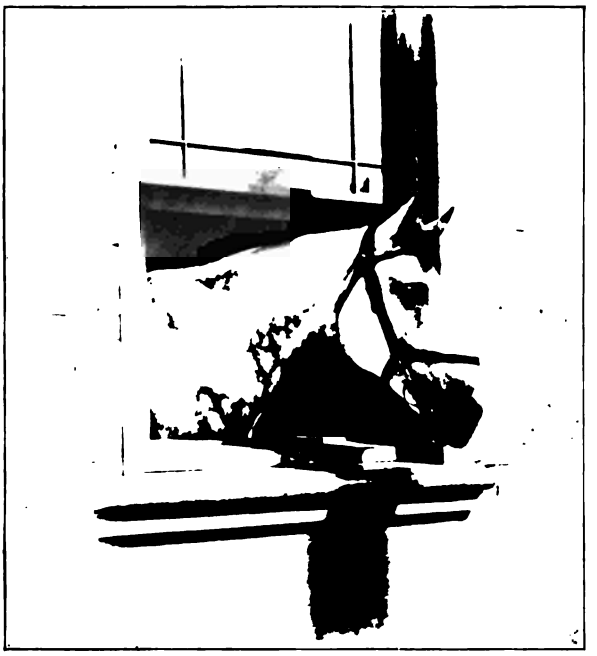
How singular it is that photographers give so little attention to the production of pictures aside from portraits, *i. e.*, pictures that might be attractive enough to the public to cause purchases of them to be made for pictorial decoration, and thus win many a shekel for the waiting picture-maker.

Subjects abound in plenty in every neighborhood, and *if they are well made* they will sell. Besides landscapes, we have in mind flowers, plants, trees, prize fruit, views of buildings, the town pump—indeed, everything and anything that may have a local interest.



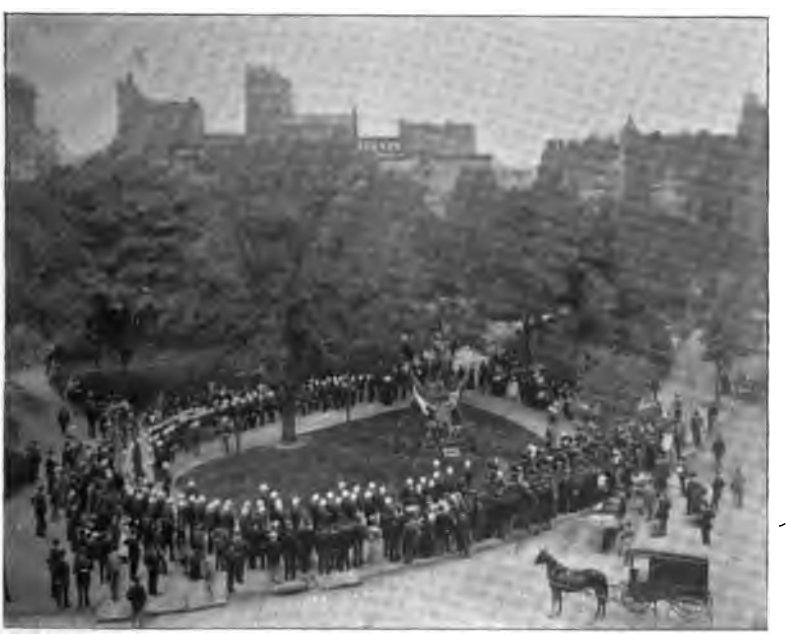
A VILLAGE CELEBRITY.

Almost every village or town has a



A FAVORITE HORSE.

village celebrity—one or more—who may —man or beast—attract notice by his peculiarities, and of whom pictures would be bought *if they are good.*



A CELEBRATION.

Use the idle camera to help up your revenue.

Some time ago a collection of portraits was shown, and among them was hung the original 8 x 10 picture of Mr. Schreiber's "Jersey Cow," vol. xxxvi. p. 20. Several ladies who visited the collection were drawn away from "pretty dresses and pretty girls" and lavished all their admiration upon that cow. They wanted a copy of it above all things else—even more than of a fine mountain view.

In every village there is a favorite horse. It might be a "Black Beauty," whose fine qualities win esteem on every side and whose handsome head, *if well taken*, would compel sales.

The decoration of homes with photographs was never so fashionable as now. Everywhere we find the little frame shop, in connection with the local paper-hanger, or the undertaker, where with a stock of mouldings, a varied collection of thick cardboard with a bevel-cutting knife for matts, it is possible to find attractive frames, etc., and many times attractive photographic subjects to put in them. Of these last there should be more. Keep the camera busy. Don't let a circus come, or a celebration pass, without being captured by your camera.

Then keep prints of these negatives in view, framed and unframed, and, our word for it, they will make business for you. Do not neglect your opportunities. Make the idle cameras pay.

We venture the hint because we *know* of many places where it works *well.*

Photography is a fine art. Do not let it go down to the dust as Grecian sculpture did, without leaving a large and permanent record of its work. Then when you send examples of your work this way for examination and praise, do not forget the new subjects made by the now idle camera. Remember that the better they are made the better they sell, and that familiar subjects are most popular.

THE TEACHINGS OF THE DAGUERREOTYPE.

BY MAJOR-GENERAL J. WATERHOUSE.

(Concluded from page 41.)

Developing Action of Red and Yellow Light.

One of the most curious and remarkable phenomena connected with the early working of daguerreotype plates is the action of red or yellow light upon the images formed either in the camera or by printing out. Thus, if we give a short normal exposure to an iodized silver plate, and instead of developing it in the ordinary way by the vapor of mercury or by treating it with an acid, iron, and silver developer, we expose it in the sun under a red glass from fifteen to twenty minutes, we shall find to our astonishment a completely printed-out image, containing quite as much, if not more, detail than would have been shown by the deposited mercury or silver, while the protected parts originally unaffected by the light remain perfectly unchanged, and, on fixing with hyposulphite of soda, retain all their original brilliancy and clearness, as you will see. The curious thing is that the iodized silver coating shows itself quite insensitive to the action of light passing through the same red glass which, after even the faintest action of white light has affected the sensitive surface, will continue the action and carry it to full intensity, and even on to bronzing or solarization.

This phenomenon seems to have been first discovered by Ed. Becquerel when working with the spectrum. He found that if an iodized silver plate were exposed to the spectrum it was not sensitive beyond a point more than half-way between G and F; but if the plate had previously received a short exposure to light it was then sensitive to the whole length of the spectrum up to B, and from this point to beyond A there were signs of reversal or destruction of the image. Becquerel, therefore, called the rays at the most refrangible end of the spectrum the *rayons excitateurs*, while those at the less refrangible end he called *rayons continuateurs.*

Shortly afterward Gaudin succeeded in developing an image as perfect as that

produced by mercury by submitting the plate when taken from the camera to the action of light under a yellow glass and without any subsequent exposure to mercury.

Claudet, Hunt and others also investigated this curious phenomenon, and a good many explanations were put forward regarding it, but the one given by Bunsen and Roscoe in their paper "On the Phenomena of Photo-chemical Induction," in the *Trans. Roy. Phil. Soc.*, 1859, p. 400, whether correct or not, is interesting in other respects. As it is not generally known, it may be worth quoting from the original, because it seems to have a distinct and important bearing upon other obscure phenomena connected with the formation of the invisible developable image on photographic plates of all kinds.

Photo-chemical Induction.

By photo-chemical induction the authors mean the act by which the resistance to chemical combinations of different bodies is diminished by the active agency of light.

"The laws of photo-chemical induction which we have here developed explain most completely many of the singular phenomena which lie at the foundation of the photographic processes. Without entering into detail concerning the relations which these laws bear to the general processes of the photographer, we will now merely consider one phenomenon which has been so difficult to explain—that it has been found necessary to assume the existence of certain rays endowed with very peculiar properties, to which the name of *rayons continuateurs* has been given. This phenomenon was first established by Edmond Becquerel from the following observations: If one-half of an iodized plate of silver or a sensitive photographic paper be protected from the action of light while the other half is exposed to a constant source of light for such a time that no alteration, either perceptible to the eye or capable of being developed by photographic preparation, is effected on the sensitive surface, the plate possesses the property, when exposed to a uniform but very slight amount of light, to blacken on the insolated half, while the part not previously exposed remains unaffected. If, in the first short insolation, every part of the plate was not exposed to the same intensity of light, the blackening effected by the following uniform exposure corresponds to this intensity, so accurately, indeed, that a daguerreotype picture commenced by this slight exposure may be developed by subsequent uniform insolation, almost as perfectly as if each amount of light represented on the picture, and not a constant amount, had acted for the whole time upon the plate. The explanation of this fact does not require the assumption of a new class of rays, which cannot commence, but only continue, the photo-chemical action. The phenomenon is in reality a simple consequence of the laws of photo-chemical induction, and proves that these relations, which we have examined only in the case of chlorine and hydrogen, occur in a slightly modified form in other photo-chemical processes. If the chlorine and hydrogen mixture were a solid substance which could be fixed upon paper without diminishing its sensibility to light, this paper must exhibit exactly the same singular property which Becquerel first observed with the daguerreotype plate or other photo-chemically sensitive surface."

They then prove this by examples taken from their actual experiments.

In the first case, if it takes, say, five minutes before any chemical decomposition of the sensitive surface is effected, and a plate has one-half protected from light and the other half exposed for five minutes, although both parts show no visible action, the exposed half has five minutes' start; and if the whole plate be now exposed to uniform insolation, the half previously exposed plate will act quite differently from the half which remained in the dark.

The exposed half begins darkening at once, gaining intensity every minute, while the unexposed half must remain for five minutes before any darkening action can take place.

The second case is similar. An image commenced by lights of various degrees of intensity is developed by a subsequent uniform exposure in depths of coloring proportional to the original varying intensities. The same thing happens if "the sensibility of the plate is altered by the first exposure to light, and in such a manner that the greater luminous intensity corresponds to the greatest sensibility. If

the varying amounts of sensibility which the surface of the plate has reached by the first exposure could be represented by depths of coloring, the various shades would represent the picture itself. With a subsequent uniform insolation, the chemical action must therefore proceed proportionally to the various amounts of light in the original picture, and if the chemical action is made visible by a change of color an actual picture must be produced."

Dr. Vogel has explained this phenomenon in a very simple manner by the supposition that during the preliminary exposure a subsalt is formed which changes the absorptive properties of the surface and renders it sensitive to red and yellow rays.

Iodized silver plates show this phenomenon quite distinctly with deep red, yellow, or cathedral green glasses. For instance, a plate had two exposures under a graduated screen: first, a short one showing no visible image; the second, printed out to show up to 3 or 4 of the scale of 7 gradations. After some twenty minutes' exposure under the red glass, the first exposure showed a clear printed-out image up to 3 or 4 of the scale, similar to that produced by the second printed out exposure, while this last image was fully printed out and extended under the influence of the red glass up to 7, or the full extent of the scale, the original numbers 0 to 3 being strongly bronzed, just as they would have been by a longer exposure to white light. They had apparently been iodized.

In the same way an iodized silver plate exposed in white light under a scale of fifteen colored glasses, and only showing visible action under the blue and lavender glasses, when further exposed under a red glass, showed action under all the blues and violets and bluish-greens, but not under the reds, yellows, and yellowish-greens at all, though this developing action was going on under a red glass.

Yellow and green glasses gave much the same effect. Violet glasses, either reddish or bluish in tint, did not answer at all—nor did blue glasses—the images already formed seemed to grow weaker instead of stronger, and they were removed entirely in fixing, leaving no trace.

The developing action of the red, orange, yellow, and green glasses may also be shown upon silver surfaces which have been treated with iodine, so as to show Talbot's rings, and, although there are no very marked changes in the chromatic relations of the different series of rings, there are changes which might repay further investigation. I have brought with me a series of plates illustrating the changes produced in these rings by exposure to white light, as well as to colored light passing through glasses of various colors.

Under a red glass there is little perceptible change in the inner series of rings, but in the outer rings the blue, violet, purple, and red are almost absent, and their places taken by shades of mauve and dull green. The rings that were entirely unexposed show no change.

Under the orange glass the effect of the glass on the series of exposed rings is very similar to that produced by the red glass, but there is also a considerable developing action shown on the unexposed rings, and the scale of coloring is quite different to that shown by the exposure to white light. In the latter the outer rings are marked by a deep pansy-like bluish-purple fringed with green, while in the outer rings exposed under orange glass we have a fine, pure blue, fringed with purple, and shading out into brown.

The action of the yellow glass is similar to the orange; but, as the original exposure under white light was not carried to the green or solarization stage, the contrast between that set of rings and those exposed under the yellow glass is not so marked, though there is a very distinct difference.

The effect of the cathedral green glass is very marked, especially in the outer rings, which show grades of pale mauve, blue, violet, and a rich bright green in the part originally exposed to white light, while the unexposed rings, though showing a considerable extension of action under the glass, are very similar to those exposed in white light, but show less red.

The blue glass shows a very marked effect, quite different to the glasses noted above. The exposed and unexposed series show practically the same effect under the blue glass, while the scale of coloring is markedly bluer, the outer rings being shown by shades of lavender or mauve working into blue-violet, and then into shades of rich blue-green, followed by a yellow-green, and then pink.

Efforts have, I believe, constantly been made to utilize this principle of after-exposure under a red glass red in practical photographic work, especially in taking astronomical photographs, but the trouble is that it works best with rather insensitive plates or papers, and so there is not much saving of time. However, it might be of use in cases where large numbers of prints had to be produced from a single negative, and it would be an object to shorten the exposure required under the negative. The point to observe is that the first exposure must be sufficient to start the action in the under-exposed parts, and that the sensitive surface must be almost insensitive to the rays coming through the colored glass. The ordinary P. O. P. paper shows the effect well.

This fact, fully brought out by Bunsen and Roscoe's researches on photo-chemical induction, but first observed by Draper, that the action of light upon a mixture of chlorine and hydrogen does not take place instantaneously, but that a considerable continuation of the exposure is necessary before an action occurs, has, I think, an important bearing upon the much-vexed question of the physical or chemical nature of the latent developable image on photographic plates.

Bunsen and Roscoe found that if the chemical rays emanating from a constant source of light be allowed to fall upon a mixture of chlorine and hydrogen which has stood for some time in the dark, no appreciable quantity of hydrochloric acid is formed during the first few moments. After some time has elapsed a small action is observed, which very gradually increases, until after a considerable space of time a permanently constant maximum is obtained. The time which elapses from the first insolation until the first traces of the photo-chemical induction become visible, and until the maximum action is attained, is, according to circumstances, extremely different.

Bunsen and Roscoe also pointed out that in their experiments they had to do with the purest form of the phenomena which are classed under the name of catalysis, freed from all foreign disturbing causes.

These researches on the action of light upon a mixture of chlorine and hydrogen have been continued by Pringsheim (*Wien. Ann. Phys. u. Chem.*, N. S., 32, 1887), who found that photo-chemical induction is not dependent upon the color of the light, but only upon its chemical intensity; and it seems probable that the photo-chemical induction is based upon chemical processes connected with the formation of hydrochloric acid gas and not upon any peculiarity in the action of light. He found also that the first visible action of light upon the gaseous mixture of hydrogen and chlorine consisted in an abruptly increasing and an equally abruptly decreasing of the volume of the gas, the amount of which was proportional to the intensity of the light producing the action. This sudden increase in the volume is brought about by a momentary disassociation of the molecules, which takes place at the moment of the chemical change. Scarcely any hydrochloric acid is formed, but rather an *intermediate* substance. The slow formation of this acid only takes place when the mixture of gases is *moist;* dry gas is not sensitive except in strong light. The intermediate product which produces photo-chemical induction, and the assumption of which is completely explained by this phenomenon, arises probably from the decomposition of watery vapor. This last observation seems to have considerable importance, as Nernst has shown.

I do not know whether any series of experiments have yet been made on the basis of these researches of Bunsen, and Roscoe, and Pringsheim with photographic plates. We know now that hydrogen is not a metal, as was at one time supposed, and therefore its relations with halogens might not be exactly comparable with those of silver and other metals forming light sensitive compounds; but from results I have obtained during the course of experiments with iodized silver plates, I believe that a carefully carried out series of observations upon the action of light on plain silver surfaces, in combination with the halogens and mixtures of them, might yield very valuable information as to the mechanism of the latent developable image and throw more light upon the composition of the products of reduction, which, though small in quantity, are in a form more easily amenable to chemical analysis than is the case with ordinary photographic plates prepared with collodion or gelatine.

Quite recently Dr. R. Luther has shown that when silver is acted upon by small proportions of chlorine water added in stages, the oxidation potential, as shown by an electrometer, remained at first constant at 0.55 volt, but suddenly sprang to 1.45 volt as soon as half the silver had been combined with the chlorine corresponding to the sub-chloride Ag_2Cl. It then remained fairly constant at 1.45 volt until the whole of the silver had been converted into chloride. This action seems somewhat analogous to Pringsheim's observation of the sudden rise at the moment of chemical change between hydrogen and chlorine. Many of Bunsen and Roscoe's observations show similar sudden rises and gradual increase to a maximum.

It seems not unlikely, therefore, that for a certain time, which is variable, according to the nature of the sensitive surface and the intensity and character of the light, the action of light is physical or mechanical, and that the latent developable image is not formed till the moment when chemical decomposition begins and the stage of under-exposure is reached. A certain further period of action produces the stage of chemical decomposition, corresponding to normal exposure, and still further we reach the stages of the visible image, over-exposure, and solarization, which in some cases appears to be equivalent to electrical polarization and reversal.

Action of Light upon Pure Silver Iodide.

We now come to the question of the action of light upon a surface composed of pure silver iodide, such as may be obtained by completely converting the thin silver film of a silvered glass into iodide.

If we expose a piece of silvered glass to the fumes of iodine for about an hour and a half to two hours, till the silver coating is entirely converted into the anhydrous iodide, we obtain an almost transparent pale greenish-yellow film. According to some writers, this film of pure iodide is absolutely insensitive to light, either visibly or by development. I have not found it so. Visible images may be obtained by exposure in daylight, or even in the camera.

As there is no active iodine absorbent present in the film, either free silver or its compounds or organic matter, the action of light on these plates would appear to be more of a physical or mechanical nature than chemical, though, as we shall see later on, there is a very strong probability that chemical actions play their part in a somewhat obscure way.

One of these plates was exposed in the camera for seventy-five minutes upon a view of sky and houses. There was no distinct visible image, but mercury vapor brought out a faint outline of the tops of the houses against the sky, the sky being darker than the houses, etc. There were no details. The plate was left in the mercury box in the hope of bringing up more, but the image gradually disappeared, and eventually did so completely, leaving absolutely no trace. The same thing happened, though not so completely, on another plate exposed in the same way, but showing a distinct visible image after exposure in the camera, and also developed with mercury. A similar vanishing of a developed image was also noticed on one of the silvered glass plates, which was exposed for some days from the glass side. There was no visible image on that side, but there was an image on the unexposed face of the glass, which could be brought out by breathing. On developing the plate with acid iron and silver and forcing it a little, traces of the image were distinctly visible from the glass side of the film; but after the film dried all traces of the image had disappeared from that side as well as from the front. From these two instances there seems to be some ground for believing that photographic images may be produced by purely molecular action.

On exposing another of these superiodized plates for five minutes in the sun under a screen of fifteen colored glasses, I noticed that where the light acted through the blue, violet, and bluish-green glasses, the film appeared more or less opaque and clouded, whilst the edges of the plate, which were freely exposed to the sun the whole time, were only very slightly darkened or different to the unexposed ground. On developing with mercury the vapor was deposited on all the affected spaces under the colored glasses, but not on the protected parts or the unaffected spaces under the red, yellow, and green glasses, nor on the over-exposed and solarized parts outside. Development with acid

iron and silver gave precisely similar results, as you will see from these two plates. The images in both cases are rather thin.

This peculiar turpidity or opacity of the fully iodized silver film, when exposed to light, was noticed by Schultz-Sellac (*Photo. Mitth.*, 1871, p. 60; or *Photo. News*, 1871, p. 308). He says that the action of light is sometimes shown by the production of a series of colors in the film when viewed by transmitted light, by refraction of the light through the particles of iodide of silver. I have not noticed these variations of color.

He further says: "If different parts of a plate are exposed to the action of light for various periods, covering portions partially with an opaque shield, which is drawn away after certain fixed periods of time, it will be observed that the action is apparent only after the lapse of a certain time, and it suddenly increases with great rapidity. To start the action in the first instance, therefore, a certain amount of light is necessary." This, it seems to me, furnishes a practical corroboration of Bunsen and Roscoe's theory of photo-chemical induction, and may be compared also with Luther's recent observations, previously referred to.

According to Schultz-Sellac, the presence of a small quantity of free iodine is necessary to the occurrence of the mechanical change. By keeping some time in the air or by treatment with iodine absorbents, the sensitiveness of the material to mechanical change is annulled, but again restored by further fumigation with iodine. In my own experience I have not noticed any very marked difference of action between plates that have been left in the air before use or fresh ones still charged with iodine, though the latter are, I agree, more sensitive—*i. e.*, more quickly affected by light than the former. If a plate has, however, been exposed to light in contact with an iodine absorbent—silver, copper, or tannin—then, although there is a decided darkening visible by transmitted light, the film does not become opaque.

If, again, as suggested by Schultz-Sellac, one of these over-iodized plates is partly coated with collodion or varnish, then we notice a very marked difference between the images produced on the varnished and unvarnished parts. This is very clearly shown in the points of a graduated scale I have here. On the unvarnished half we have a strong series of pale whitish-yellow bands, decreasing very distinctly in density, while on the varnished half, though exposed longer, the images of the bands, though visible, are all more or less phantoms. It must be noted, however, that the varnish is a strong iodine absorbent, which collodion might not be.

Schultz-Sellac found that somewhat similar effects could be produced with films of pure iodide of silver in collodion fumed with iodine. He attributes the changes of color which are observed to a mechanical change in the particles, and not a chemical change.

In a paper published last June in *Wiedemann's Annalen*, H. Scholl has very fully investigated the changes produced by the action of light on silver iodide and Daguerreotype plates. In the third section he gives the results of his inquiries into the cause of this peculiar turbidity. He first shows that, as we have already seen, if the film of pure silver iodide produced as described is covered over by a coating of varnish, collodion, or some other suitable substance, the cloudiness is produced very much more slowly. This may be due either to the coating preventing the escape of iodine or the access of air. If any iodine is given off during exposure, we ought to be able to detect it by placing the iodized film in contact with a plain silvered glass surface. On doing this he found that there was some change on the silvered surface, but not more than could be observed by exposing the silver to a light of the same intensity, but not in the presence of the silver iodide. There were no distinct interference colors, and he does not consider the experiment convincing.

I have tried this experiment several times in different ways, and find that the plain silver surface is very distinctly and even visibly affected by contact with the iodized plate during exposure, and certainly very much more so than if exposed by itself under the same circumstances. For instance, a slip of pure silver-foil was exposed for fifteen minutes in the sun under one of these iodized silvered glass films, but separated from it by a cut-out screen of mica. The silver-foil showed

distinct images of the cut-out designs, which darkened still further when exposed to light, and were quite soluble in a solution of potassium iodide. The parts of the foil protected by the mica were quite unaffected. Similar results were obtained with polished copper and with paper soaked in tannin, the images in the latter case being brought out with weak aceto-nitrate of silver.

There is little doubt, therefore, that iodine was given off under the influence of light in presence of an iodine absorbent. It may be noted that in all these cases the parts of the iodized silvered glass that had been in contact with the iodine absorbent surfaces were transparent, while those in contact with the mica showed distinct cloudiness or opacity, though enclosed and protected from the air.

Scholl then argues that if the clouding be due to loss of iodine during exposure, it ought to be less or disappear altogether if the plate is exposed in the vapor of iodine. He found, however, that, on the contrary, the plate clouded much more readily under exposure to light in the iodine vapor than it did in the air. The opacity, therefore, is not due to loss of iodine, and the action of the collodion or varnish in hindering it must be due to its preventing the access of air to the film. The change in the iodide must consequently depend upon the nature of the gases in which the plate lies during exposure.

(The occurrence of the clouding in the cases above noted, when the iodized films were exposed in contact with mica, may, I think, be explained on Scholl's theory by the iodine being first given off and then resensitizing the film, as if it had been exposed in the vapor of iodine.)

Experiment showed that hydrogen and nitrogen had absolutely no effect in producing the opacity. In oxygen, however, it was produced rather more quickly than in air, and it was evident that oxygen is the active agent in the change.

This being the case, the first question was whether any oxygen compound of silver and iodine is formed—such as silver oxide, iodate of silver, or silver oxyiodide? It was found, however, that the clouded film remained perfectly unchanged in ammonia, and no trace of chloride could be obtained by adding hydrochloric acid. Moreover, the opacity could be produced in the complete absence of oxygen in an atmosphere of hydrogen, which, as we have seen, favors it. In this case the opacity occurred distinctly more quickly than it did in air with the same exposure.

If no oxygen compound is formed, Scholl says, we can only conclude that pure silver iodide is present. That this is the case may be shown by heating an exposed plate which is strongly opaque in parts; both the clear and opaque parts turn of a clear deep yellow, which is characteristic of the change from the hexagonal system of crystallization to the regular at temperatures over 146° C. (In repeating this experiment I find that the deep yellow color produced by heating goes off again at once as the plate cools. This is exactly analogous to the deepening of color of pure iodide in the light, and the return to the original color I have already noticed.)

In fixing solutions of sodium thiosulphate or potassium cyanide, the film dissolves equally in the unexposed transparent and exposed opaque parts. (The action of sodium thiosulphate is to make the unexposed parts of the film opaque, just like the exposed parts. Potassium iodide has a somewhat similar effect, ammonium sulphocyanide also, but it seems to dissolve the exposed opaque parts less readily than the transparent parts.)

From these experiments Scholl says we may conclude that the opaque film is formed of pure, mechanically divided silver iodide, and that oxygen plays a catalytic part in advancing the formation of an intermediate substance. He considers the reactions caused by the exposure of the silver iodide to be somewhat as follows:

According to Arrhenius, silver iodide exposed to light is dissociated and its stability strongly affected. For complete decomposition a substance must be present which can combine either with silver or iodine. In the foregoing case the silver forms, with the oxygen of the air, a compound, possibly Ag_2O, and the silver iodide will be more easily decomposed by the presence of oxygen. This silver oxide must be again decomposed by light, and the silver set free again forms silver iodide with the free iodine, whereupon the same process can begin all over again.

$2AgI + O = Ag_2O + 2I = 2AgI + O =$ etc.

In this way there must be a continual transferrence of atoms, which, no doubt, is connected with the loosening and clouding of the whole film.

It is unimportant whether Ag_2O itself or another body easily decomposed in light is formed; the essential point is that oxygen, by forming a compound, favors the complete decomposition of the already dissociated silver iodide, and then there is an immediate return to the original state, and a new formation of the silver iodide originally present.

Iodine must evidently, therefore, act more strongly than oxygen. On account of the greater affinity of silver for iodine than for oxygen, a compound which can be split up by oxygen must be decomposed much more readily by iodine. It is thus easy to understand why the opacity takes place so much more readily the greater the excess of iodine the plate exposed to air contains.

The fact that the images produced by the exposure of this pure iodide to light can be developed by mercury vapor or by silver deposited from an acid pyrogallol developer does not require, according to Scholl, to be attributed to a chemical change in the exposed film, but rather to the roughness of the surface caused by the breaking up of film in the exposed parts, the rough surface more readily taking the mercury and silver. This agrees with my own observations, but I do not think it applies in all cases.

I have gone somewhat fully into these observations of Scholl's in order to make them clear. Whether his theory is correct I cannot say; but that oxygen, taken either from the surrounding air or from the watery vapor which is always more or less present in it, does not play an active part in the decomposition of silver haloids in light, has been proved by H. B. Baker (*Trans. Chem. Soc.*, 61, 1892, 728).

From experiments recorded in the *Researches on Light*, Hunt came to the conclusion that the first action of the solar ray is to liberate one-half of the combined halogen (chlorine in the cases recorded, but the conclusions apply equally to iodine and bromine), which is very readily, moisture being present, replaced by oxygen. This absorption of oxygen or its combination with the decomposing chloride he proved by placing some pure silver chloride in a bent tube closed at one end while the other was immersed in distilled water. After some days' exposure the water rose in the tube and contained chlorine, which was shown by the usual precipitate with silver nitrate.

That water is decomposed by the action of light on silver iodide is, I think, shown by the following simple experiment: Some of the brick-red powder of anhydrous super-iodized iodide was placed in a tube with distilled water, and then exposed in the sun. After a time it was found covered with little bubbles of gas, most probably oxygen. The iodide became paler in color, though not lemon-yellow, and the supernatant watery fluid gave a slight cloudiness to a solution of silver nitrate. By remaining longer in the water the pale yellow iodide was formed.

Similar little bubbles of gas were observed when precipitated silver was treated with iodine in distilled water and exposed to the sun.

Captain Abney has recorded a similar experiment in which silver iodide was placed in a test-tube with a boiled solution of silver nitrate. On exposure to light, bubbles of gas were found collecting in the solid iodide, and proved to be oxygen; from which, he says, we may suppose that the liberated iodine decomposes the water in contact with it (as does chlorine) and produces hydriodic acid and oxygen.

Professor Meldola has also gone into this question in his *Chemistry of Photography*, and seems to think that an oxychloride may be formed by the decomposition of silver chloride by light in presence of watery vapor. This view is confirmed by Baker's recent work, already referred to. From the appearance of the substance produced by the union of silver and iodine under water, and its peculiar olive-green color, it is possible that it may be an oxyiodide or a subiodide, and it may be worth more careful examination than I have been able to give it.

In an earlier part of the lecture it was stated that iodine has a very much greater affinity for oxygen than the other halogens have, and so it seems not unlikely that oxygen may produce more marked effects upon iodized silver plates by the action of light than it does with the chloride or bromide.

I have noticed other effects in the opaque parts of these films which seem to be due to the formation of some gaseous product, but further observation is necessary, the tearing up of the film can, however, be readily seen on two plates I have here. Another plate exposed in contact with a gelatine film negative does not show it, but rather a great increase of density.

That there is an evolution of a gaseous product during the exposure to light in contact with air of these superiodized plates is demonstrated by the blister-like appearance visible in the exposed parts. Moreover, on exposing one of these films in contact with a silvered glass plate not only was the surface of the silver darkened in the parts exposed to light through the iodized film, but minute black spots were produced on the silver corresponding exactly with the blisters, as you will see. The composition of the dark spots remains to be seen, but they were most probably caused by iodine expanding and bursting through the film. This effect has not been noticed by Scholl.

If Scholl's theory of the catalytic action of oxygen be correct, and this action takes place when haloid salts of silver are exposed to light, even without the presence of organic matter, it will probably also take place, but in a much greater degree, when organic matter is present. When oxidation takes place in presence of water or watery vapor Schönbein has shown that peroxide of hydrogen is formed, and, more recently, Sonstadt has traced its presence, when chloride of silver is exposed to sunshine in water (*Proc. Chem. Soc.*, 14, 1898, 179). This substance, as we know from Dr. W. J. Russell's recent researches, is capable, even in very small quantities, of producing the developable state of the haloid salts of silver on an ordinary gelatine dry plate. In this way, therefore, we may possibly be able to trace the connection between the effects produced by peroxide of hydrogen vapor and by light upon the haloid salts of silver. Further investigation is, however, required.

I hoped to have been able to say something with regard to the action of light upon the ordinary Daguerreotype plate, and had intended to almost confine myself to the question of the probable nature of the latent and printed out images upon iodized silver, but, as I went on and my attention was diverted to the points I have brought before you, I have not been able to complete the work I began. I propose, therefore, to close my lecture here and defer further consideration of the question till I can work it out at leisure and give the results to the Society in a supplementary paper.

The points I have dealt with are none of them new, but are, I think, of some interest generally, and I hope I may have been able to throw light upon them and carry on the work of my predecessors.

GOOD WORDS.

THIS is about the time of year when we lose nearly all of our subscribers, and when the majority of them are coming back to renew their attachment. In our December issue we led off the first page tremblingly, with a request for prompt action on your part. It was not long before the tremble was over. The very first response came from a veteran *worker* in our art who had subscribed for our MAGAZINE since it was born, and who, although retired from active business, still *wants* our useful monthly. With his permission we engrave and publish his letter below. It speaks for us and itself.

From a few others, without their permission, we extract the following:

"Don't dare to discontinue, for we cannot keep house without WILSON'S; keep us on your list while we live."

CALIFORNIA CAMERA CLUB,
San Francisco, Cal.

"I consider your MAGAZINE indispensable—the best of any I am taking, and I take several." C. C. LEWIS,
Monmouth, Oregon.

"We appreciate your MAGAZINE more than any other we ever had."

ROGERS & NEWING,
Binghamton, N. Y.

"I should feel lost without your MAGAZINE." ELLA L. BUCK,
Fort Atkinson, Wis.

Cleveland Dec. 11th 99

My Dear Wilson:

After 36 years "hand in hand," I don't feel like dropping my old friend—the Philadelphia Photographer—later Wilsons Magazine, even though I have retired from the business. In those years you have done your work faithfully and bravely. I hope many years are yet in reserve for you for a continuance in the good work.

Find herewith my check for another year. Wishing for you a Happy Christmas and a prosperous year for 1900

Yours truly

J. F. Ryder

"As an amateur I have gotten more information—more satisfaction—from your MAGAZINE than all the (four) others to which I subscribe."

V. G. MACNIDER,
Houston, Texas.

"Myself and friend—amateurs—who make no money from our fad, feel that your MAGAZINE is well worth the price and more to us. Please continue our subscription."

F. R. GRAY,
Allegheny, Pa.

Another veteran says:

"It is not possible to get along without your MAGAZINE. Hope you may have a larger field for your 1900 edition than ever."

HARRISON KRIPS,
Philadelphia, Pa.

An old reader in the West writes:

"I consider WILSON'S the thing of them all."

O. H. MANZER,
Oshkosh, Wis.

Here is a model one:

"I send you $5 for the renewal of my subscription for a copy of *Mosaics*, 1900, and for a copy of *How to Enjoy Pictures*. While I am only an amateur and I never

take a portrait, I find more useful information in your MAGAZINE than in all the others together. I don't take them all, but I think I have seen them all."

S. P. BALDWIN,
Attorney-at-law, Cleveland, Ohio.

A veteran subscriber who resides in a village about fifty miles from New York City writes as follows:

"I feel indebted to your journal for much of my success. I have a nice trade here. People from here doing business in New York every day come to me for their portraits; and some who have moved there come back here for their work, I am proud to say."

This is a good testimonial for all of us. We could considerably lengthen this list from the new letters recently received, and doubtless there are many to come.

We do not boast, individually, that our MAGAZINE is the only one that is *good*, nor claim or intimate that our contemporaries are *not* good, but we do try to make our MAGAZINE useful to all.

We try to get an understanding of what our subscribers need, and then to secure and give it to them of the best quality.

In this effort they uphold us, and we are glad to have their expressions of approval. We like to be useful. We love photography and desire to help it grow.

There is one wish we have and we make free to express it. We wish that our present subscribers would do as those did for whom we worked twenty years ago—*i. e.*, use some little generous effort to try to increase our circulation. Our rates are not remunerative enough to enable us to offer *large premiums*, but you may be assured that if we grow you shall all share the advantage. Your operator, your amateur friends, your town library should *all* have our MAGAZINE. Won't you help to bring it about?

DEVELOPMENT AND DEVELOPERS.

BY CHAPMAN JONES.

IN response to the article on "Tinkering with the Developer," reprinted on another page from *Photography*, the editor of that journal has received many letters from prominent workers. Among these is an interesting communication from Mr. Chapman Jones, which we make room for, as offering practical information.—ED. W. P. M.

As I understand the word "tinker," I do not remember to have "tinkered" with anything since I was a boy at school. As to developers, I continue to vary their constituents to suit my needs. Doubtless many persons think that they can do more than they really can do in producing variations in developed plates by varying the process. In some cases, on finding the limitations narrower than they believed at first, they have rushed to the other extreme, and assert vigorously that no variation, or practically no variation is possible. As usual, the truth lies between the extreme views. At least that is my opinion.

The only variation that I can understand as advantageously possible is in the *extent* of development. This may be varied in two ways: 1. The gradation may be made more or less steep, that is the negative may incline toward flatness or vigor. In this case the detail is all brought out, and the extent of the development refers to the density. 2. The exposure effect may be developed entirely or partially with reference to detail. In this case the "speed" of the plate is practically altered. These possibilities give one great power, too much to my mind to neglect, though not so much as it used to be fashionable years ago to claim. I never believed in the possibility of more control than this, but none of the modern work not the unsupported assertions that one hears too often as to development being "purely mechanical," the character of the negative being settled when the exposure has been given, and so on, have affected either my views or my practice. Many appear to have been misled through not realizing the difficulty, if not the impossibility, of proving a negative statement.

In my own work I now use two developers, pyrogallol and metol. Metol has

replaced eikonogen with me since a few years ago, though I cannot say exactly why, for whether for lantern plates, negatives, or bromide paper, I have not recognized any difference between the results that they yield when used according to good formulæ. I have experimentally determined my own formulæ, and with metol it is a single solution that I vary only by adding more or less water. Except, however, that lately I have found advantage in omitting the bromide and adding it only when wanted. When bromide is needed to keep the plates "clean," I sometimes take care to use a portion of developer that has been used before, instead of adding bromide. I always bottle up used metol developer, and often have three grades, much used, little used, and not used at all, and select the one that will best serve my purpose. The most used developer gives the greatest contrast when development is not pushed to completeness, and very often complete development would give me useless results.

My formula for metol is:

Metol	8 grs.	or	16 grms.
Sodium Sulphite (cryst.) .	48 "	or	96 "
Sodium Carbonate (cryst.)	48 "	or	96 "
Potassium Bromide . .	1 gr.	or	2 "
Water to	1 oz.	or	1000 c.c.

I make it up once a year; it will keep in good condition much longer than that requires. For use, it is diluted with at least an equal bulk of water, more often two or three times its bulk. For lantern slides I add eight to sixteen times its bulk of water, and for bromide paper three times its bulk. For hand camera plates (quarter-plates) and general experimental work I nearly always use this developer, because of its simplicity.

For larger plates I almost always use pyrogallol with sodium carbonate and sulphite, and potassium bromide or not, as desirable. I keep the constituents all separate. Pyrogallol dry, sodium sulphite (crystallized), in 50 per cent. solution (I know it is impossible, according to the books, but I have done it for years), sodium carbonate (crystallized) and potassium bromide in 10 per cent. solutions. To each ounce I take pyrogallol from about five to four or more grains, sodium sulphite twenty grains, sodium carbonate from three to twelve, generally six or nine, and bromide from nothing up to few grains. This developer works more slowly than the metol, so that one can stop more easily at the right time, and it is adjustable to a certain extent for producing the differences I have mentioned. One cannot make much difference during development by adding more of a constituent, except, perhaps, in the time required for development. If this developer gives too much contrast before all the detail is out, the metol formula given above (fresh, and with little or no bromide) will be advantageous, as that gives detail much more rapidly in proportion to density, and the development can be stopped when the density is sufficient.

Occasionally I use ammonia with six or eight grains of sulphite to the ounce, as ammonia gives a dense image more readily with some plates than sodium carbonate.

I never work without sulphite, as the presence of developer "mud," as the oxidized developer stuff has been called, is highly objectionable to me, because it is uncertain in every way. Uncertain in its production, uncertain in its effects, liable to change if let alone, certain to change if treated in any way, and probably never correctly proportioned to the density of the image. I never use potassium metabisulphite, because by taking the quantity that furnishes the required acid I do not get enough sulphite, and by taking enough sulphite I get too much acid. A 10 per cent. pyrogallol solution is always at hand in my dark-room, made up with sodium sulphite and a little acid (generally citric), and such a solution is in good condition after a year if not two. This solution is not often used, but it is sometimes convenient. Rodinal is also convenient. It keeps well, and a few drops added to a pyrogallol developer, even during development, is useful as an accelerator. Of course, also, it may be used alone.

Finally, my experience leads me to believe that if one wants to develop the whole exposure effect, that is to reduce to the metallic condition all the silver bromide affected by exposure, it matters very little, if at all, how you do it, so long as you do not make a mess of the plate. But if there is more exposure effect than is desired, whether over the whole or only on a part of the plate, then control is possible and necessary. A subject with strong contrasts may, with full development, give disastrous density in the high lights, although the

shadow detail is all there. Within certain limits the same exposure may be under-exposure, or over-exposure, according to the development. The "speed" of a plate depends partly on its treatment apart from its chemical constitution.

THE PHOTOGRAPHERS' COPYRIGHT LEAGUE.

THE annual meeting of the Photographers' Copyright League of America was held at the new Falk studio, Waldorf-Astoria Hotel, New York, January 23d. In the unavoidable absence of President S. L. Stein, the chair was taken by Vice-President Bert Underwood. Among those present were B. J. Falk, J. Schloss, C. C. Langill, J. Byron, C. J. Hare, C. E. Bolles, and John A. Tennant, of New York, Chas. Schervee, of Worcester, and others actively interested in the work of the League.

After the reading of telegrams and letters from absent members regretting their inability to be present at the meeting, the minutes of the previous meeting were read and adopted. The reports of the Secretary and Treasurer were read, audited by a committee and approved. The Secretary's report stated that the League had largely increased its membership during the year, and the Treasurer's report showed a small balance on hand in favor of the League.

The chairman, regretting the absence of President Stein, called upon Mr. Falk for some account of the work of the League during the year. Mr. Falk, in an informal way, stated that the year had, fortunately, not been marked by any active attempts at legislation detrimental to photographers' copyrights or the work of the League. He alluded to the antagonistic attitude of the daily press with regard to the general question of photographic copyright, and characterized several recent articles which have appeared in the newspapers as extremely unfair and as containing misstatements of fact which called for public protest. As a partial remedy, he suggested that the members of the League, or the League in an official capacity, should refute such articles as quickly as possible after their appearance in the public prints. It was his opinion that an intelligent statement of the facts in any disputed case would be presented to the public by fair-minded newspapers.

Turning to the work of the League, Mr. Falk pointed out that it was wholly due to the active propaganda and work of the League that newspaper and other publishers had been compelled to recognize the property rights possessed by the photographer in his work. He urged that photographers should support the League more generously, both by personal adhesion and financial aid. Alluding to the abolition of membership dues he stated that "free membership" left the League without means proportionate to the work it had to accomplish, and suggested that some means be taken to secure a voluntary contribution each year from all interested in the work, naming a voluntary contribution of at least one dollar per year from each member as reasonable evidence of the member's good faith.

Upon the conclusion of Mr. Falk's address, several interesting copyright cases recently before the courts were discussed, and it was unanimously agreed that the time had arrived when photographers should unite to secure the fullest protection of the law for their work. The Secretary read extracts from letters recently received from photographers showing lamentable ignorance concerning photographic copyright, which, in some cases, involved considerable loss to the photographer. He urged the necessity of the photographer being fully informed as to his property right and its protection. It was impossible to foretell, he said, when these property rights would be attacked, and the only intelligent method of protection was found in a full knowledge and use of the copyright law which, he declared afforded the photographer the same rights over his work as are enjoyed by the makers of books, designs, maps, or by writers and painters.

A motion was then carried that the Secretary of the League take the necessary steps to bring the aims and work of the League prominently before the National and State Photographers' Associations, with a view to obtaining their official indorsement and the practical support of their members.

The Executive Committee of the League, consisting of President S. L. Stein (Milwaukee); Vice-President, Bert Underwood (New York); W. H. Rau (Philadelphia); Secretary and Treasurer, Chas. E. Bolles; B. J. Falk (New York); F. H. Child (Newport, R. I.); and R. T. Eddowes (New York), was unanimously re-elected, and this committee, in turn, re-elected the officers of the past year to serve during 1900–1. This election was duly ratified by the meeting, and by special motion John A. Tennant (New York) was elected "press representative" in behalf of the League's interests. The meeting was then formally adjourned.

Photographers desiring to become members of the League should send request for enrollment, with their name and address, to the Secretary, Mr. Chas. E. Bolles, 244 Fulton Street, Brooklyn, N. Y. Information concerning copyright matters or the League may be had at any time by applying to Mr. Bolles or to the editor of this MAGAZINE.

After the meeting had adjourned light refreshments were served and Mr. Schervee, of Worcester, offered a toast congratulating Mr. B. J. Falk upon the successful inception and opening of his magnificent new studio, and wishing him the fullest measure of success in its conduct. This was acknowledged by Mr. Falk, who then led those present through his establishment, which may be truly said to surpass any other studio within our knowledge in equipment and beauty. In a later issue we will give an account of it in these pages.

OBITUARY.

BENJAMIN FRENCH.

IN the death of Benjamin French, which took place at Boston during the first week of January, we lose one of the "fathers of American professional photography," of whom few now remain with us. More than half a century ago (1844), when Daguerre's discovery was new, the photographic fever seized Mr. French, and he left his position as the head of a Boston business college to take up the new art. His first venture was the opening of a studio for portraiture, in which he was assisted by a capable operator. After a few months a department for the sale of photographers' supplies was added, and in 1848 this branch had become of such importance that the studio was relinquished.

The business kept pace with the growth of photography, and within a few years, by his energy and enterprise, Mr. French became not only wealthy and prosperous, but also the most prominent figure in the photographic life of New England.

In 1856 he imported the Darlot lens and vigorously introduced it into the profession. Three years later he took up the American agency for the Voigtlander lenses, with which his name will always be remembered. His handling of these fine instruments was marked by so much vigor and persistence that they quickly became the favorite lenses among American photographers, and still retain their popularity.

Mr. French was a typical New Englander in appearance and business methods, a shrewd adviser, honorable, tactful, and always ready to lend a helping hand to those in difficulties, financial or otherwise. It would, we believe, be difficult to find a New England professional who could not recall some kindly deed for which he had to thank the veteran stock-dealer, and his death will be keenly regretted by thousands who, at one time or another, have found in him a trusty counsellor and true friend.

He was born at Lebanon, N.H., in 1819, and had therefore entered his eighty-first year, of which long and useful life over fifty years were devoted to the advancement of photography. For the past few years he retired more and more from the active conduct of the business, and the estate has latterly been administered by Mr. Frank L. Washburn, under whose direction the business is being continued.

B. L. H. DABBS.

Another veteran and good friend has passed away in B. L. H. Dabbs, of Pittsburg, who died on December 13th, after a long sickness. Born in England, in 1839, Mr. Dabbs came to this country in early youth, and forty years ago opened a mod-

est studio in Pittsburg. His work speedily attracted attention, first at the State fairs and later in the national conventions. Unspoiled by success, Mr. Dabbs was a friend and helper to hundreds, on whom his passing will fall heavily.

JOHN RUSKIN.

By the death of John Ruskin, on January 20th, in England, at the advanced age of eighty, the art world has lost its most picturesque figure. Mr. Ruskin leaped to sudden fame by a series of able letters on "Modern Painters," written to the London *Times*, and followed them up with book after book on architecture, painting, ethics, economics, and other subjects. A close and deep thinker, and a writer of equal force and beauty, he propounded many doctrines which railed against things as they are, with all the staunch courage of a Britisher who has strong convictions. His works brought him many antagonists and more friends, and whether his teachings were right or wrong—and doubtless they were, in part, both—his influence on the whole art trend of the times was wide and altogether for good.

STRIPPING FILMS FROM GLASS.

BEFORE an English society recently Mr. F. Kellow described an easy method for removing and transferring gelatine films from glass. Many people, he observed, saw in such operations as those he was about to demonstrate great difficulty and risk of damage, but this was mostly due to fancy. He had saved by its means many negatives which had been accidentally cracked, and, as this might occur with anybody, he proposed to show the *modus operandi*. A formula was published some time back composed of carbonate of soda and formalin, followed by hydrochloric acid. With this, however, he found the gelatine rather apt to blister. For the carbonate of soda he therefore substituted caustic potash. The following solutions are made up:

A.—Ten per cent. Solution of Caustic Potash	½ ounce.
Commercial Formalin	¼ "
Water	5 ounces.
B.—Hydrochloric Acid	1 part.
Water	60 parts.

The negative is put for five minutes in solution A, followed by a similar period in solution B. If the negative be cracked a little preparation is required, or the sharp edges of the glass will cut through the gelatine. The method he adopted was to take a clean piece of glass upon which the glass side of the negative was affixed with Canada balsam, thinned down with benzole, previously heating the glass plate. It was then set aside to harden for some twenty-four hours, when it could be treated as described. This applies only to negatives of which the glass is cracked but the film not broken. With negatives of this latter category a further difficulty is encountered. Means must be taken to fit the severed piece exactly to its counterpart in the way described for the cracked glass. A solution of pure gelatine is then prepared and poured hot over the whole film, allowed to set and dry, afterward being soaked in formalin solution.

In reply to an observation, he agreed that cobbler's wax or marine glue would serve instead of the Canada balsam, but he had not used other than the last-named. The hot gelatine solution had not, in his hands, melted the gelatine film or spoiled the image. Probably, as Mr. Haddon suggested, the developed film was sufficiently tanned to stand the solvent action of the hot solution. After the immersion in the acid bath (B), the film readily came away, and could be transferred to a new glass, or reversed, as desired. It may then be dried, washing afterward to get rid of the acid. It was curious to note that this method did not act with other than developed and fixed plates. He objected to the carbonate of soda on account of its tendency to unevenly stretch the film.

A member suggested that its power of stripping a developed and fixed film, while refusing to bring away that of an unexposed or undeveloped plate, would be explained by his idea of the action that went on. The fixed film he likened unto a sponge. The particles of silver unexposed would lie near to the back of the plate, and these fixed out would leave the film full of minute interstices. The formalin hardened the surface and the acid worked through underneath, and the sponge

formation facilitated the removal of the film.

Another member said that he would prefer the use of hydrofluric acid to dabbling with caustic potash. Unless the former was very strong it would not be so harmful. He thought, too, that the acid from solution B might be removed at once by immersion in a judicious blend of alcohol and water.

A third member explained his method of using the preparation made by Avery for stripping purposes. It was a very expeditious operation. He usually cut the negative film through with a knife, about one-eighth of an inch from the edge all round. This gave a new and clean edge to the film. He then flowed over the plate a small quantity of the formalin and spirit solution, with a few drops of fluric acid. A piece of paper served to guide the stuff over, and the fingers need not come into contact at all with the mixture. After fifteen or thirty seconds the film would probably lift up; if not, another application would ensure its removal. A good way to remove the film when treated was to rub down upon it a sheet of good surfaced paper—not a bibulous sample; lifting a corner, and with it the film, one could strip the two together without fear of damage to the gelatine. The hydrofluric acid was in such small proportion that little harm could result from it, but the application of several more doses of the formalin and spirit would practically remove it. For celluloid films some other treatment was required. He coated the gelatine film with gelatine solution, and, after drying the same, put the whole into a solvent of celluloid. The supplementary coating of gelatine gave the negative film sufficient body to stand handling.

EDITOR'S TABLE.

A New Intensifier.—In *Le Photogramme*, November, 1899, published at Paris, I noticed a communication signed "Lumière Freres et Seyewietz," who recommend highly the following intensifier:

Water	100 minims.
Sodium Sulphite, dry .	10 grains.
Mercury Iodide . .	1 grain.

I used the solutions I happened to have on hand—1 gr. saturated solution mercury phosphate, potassium iodide sufficient to fully redissolve the red precipitate, and 8 gr. saturated solution of sodium sulphite. The bath gave an excellent intensification. Next, wash the negative slightly; then immerse for perhaps five to ten minutes in some ordinary developer, as pyro or hydrochinon, to reduce the iodide. Then wash and dry. The intensifying bath may be used as long as it works. The originators of this intensifier claim it to be reliable and the result *permanent*. I have thus far tried it probably a dozen times, and find it all that it is claimed to be. If the result is permanent this intensifier is no doubt to be highly recommended.

John Gmeiner.

Mosaics, 1900, continues to win new popularity, and our slender stock gets lower every day. It is universally pronounced to be the best volume of its series, and every practical photographer should see to it that he secures a copy. Paper cover, 50 cents, post free.

Photographic Manufacturers Organize a Co-operative Association for Mutual Benefit.—John Carbutt, the well-known manufacturer of photographic supplies, returned yesterday from New York, where he attended a meeting of prominent members of the trade, who met and organized the Photographic Manufacturers' Association of America.

The meeting was held at the Waldorf-Astoria, and was attended by representatives from Chas. Cooper & Co. (N. J. Kleinhans, manager), New York; the Scovill & Adams Co., New York; John Carbutt, dry plates, films, and paper, Philadelphia; Willis & Clements, Philadelphia; the Bullard Camera Co., Springfield, Mass.; Manhattan Optical Co., New York; the Kozy Camera Co., Boston; Defender Photo Supply Co., Rochester, N. Y.; Vive Camera Co., Chicago; Gundlach Optical Co., Rochester, N. Y.; New York Dry Plate Co., and the G. Gennert Co., New York.

The organization is a co-operative association for the benefit of its members and retailers, and especial emphasis was placed on the statement, "It is not a trust, but organized to oppose any coalition having for its object the concentration to one source

of the supply of photographic goods, and for the dealer to assert his right to buy such articles as he may choose from any source whatever."

W. I. LINCOLN ADAMS was elected President; M. B. HOYT, Secretary; and F. H. HOGE, Treasurer. The new association will be immediately incorporated under the laws of New York State, and every action taken to get the support of retailers throughout the country.—*The Ledger*, Philadelphia, January 13th.

PHOTOGRAPHER C. F. RAY, of Asheville, N. C., has been commissioned by the Southern Railway Co. to prepare eighteen photographs, each 18 x 22 inches in size, of scenes in Western North Carolina, to be placed in the Southern's exhibit at the Paris Exposition. The pictures to be furnished by Mr. RAY will include views along the Swannanoa and French Broad Rivers, Biltmore House, and the leading hotels of Asheville. The selection of Mr. RAY for this commission is a well-deserved compliment to his work.

A NEW STUDIO.—Mr. W. N. BRENNER, of Cincinnati, announces his removal to a new studio at 14 and 16 East 4th St. (Boylan Building). The new establishment is most completely equipped with modern conveniences, and the decoration of the rooms is tasteful and effective. We wish our subscriber every success.

Royle's Pocket Reminder, a complete diary and note-book for 1900, reached our table some weeks ago, but was put into active service, and so has escaped attention here. It is issued yearly by JOHN ROYLE & SONS, Paterson, N. J., and is a much sought after help for business men. From one of its pages we note that Messrs. ROYLE are now prepared to supply electrically driven process machinery—a convenience which will be much appreciated in the process shop.

PROF. A. H. GRIFFITH, of Detroit, gave a lecture on "Art," January 24th, at the studio of A. L. BOWERSOX, Canby Building, Dayton, Ohio, which many Dayton picture-lovers attended with pleasure and profit.

Collinear Photography is the title of a useful lens booklet issued for free circulation by the VEIGTLANDER & SON OPTICAL CO., 463 West 14th St., New York. It gives much practical information about the new *Collinears* made by this enterprising firm, and should be seen by lens buyers.

THE BLAIR CAMERA CO., of Rochester, N. Y., is offering a number of new designs in camera construction for this season. The 4 x 5 Weno Hawkeye, which retails for $8, deserves special mention, as it is, without doubt, the smallest non-folding, daylight loading film camera in existence for 4 x 5 photos. There are no removable parts, which is an advantage to be considered, and, owing to the beauful finish and moderate price, it must prove a winner.

ARISTO SELF-TONING PAPER. We have given careful trial to the new *Self-toning Paper* recently introduced by the AMERICAN ARISTOTYPE CO., both with the simple treatment of salt and hypo-soda, and with the use of *Aristo Single Toner*. The results have been uniformly good, and the new paper will undoubtedly meet with great popularity among professionals as well as amateurs. The tones secured according to the method given by the makers do not bleach out, as with some other papers of this class, but retain the depth and brilliancy in a very pleasing way. The product is one of which its manufacturers may justly be proud, and we recommend it to the notice of our readers as a reliable convenience.

THE PHOTOGRAVURE AND COLOR CO., of New York, send to our table a dainty calendar for January illustrated with a photogravure of a scene from *Ben Hur*, from a photograph by Mr. H. J. BYRON.

MR. J. ED. RÖSCH, of St. Louis, writes us that he will remove from his present location to a fine new studio at Grand and Finney Avenues early in February. We will endeavor to illustrate the new establishment in our pages before the year is much older. Meanwhile Mr. RÖSCH has our cordial good wishes for his success.

How to Enjoy Pictures. Miss EMERY'S charming and valuable volume has met with such popularity among our readers that we have been obliged to order a new supply, although our first order was, we thought, sufficient for all possible demand. It is one of the best helps we know of for the picture maker, and a splendid volume for the entertainment of waiting patrons in the reception-room. Price, $1.50, post free.

MR. JOHN CARBUTT, Wayne Junction, Philadelphia, notifies us that the great advance in the price of baryta paper has compelled him to make a slight advance in the list prices for his *Vinco* paper.

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1900

PRICE, 30 CENTS.
Vol. XXXVII. ✣ ✣ ✣ No. 519.
MARCH. 1900.

WILSON'S PHOTOGRAPHIC MAGAZINE

DEVOTED TO PHOTOGRAPHY. MONTHLY: ILLUSTRATED.

OLD vs. NEW METHODS IN PORTRAITURE 97
THE P. A. OF A. EXHIBITION AT MILWAUKEE 101
THE CHANCE PICTURE AT PHILADELPHIA SALON, 1899. By W. B. Swift . 102
AN INTERVIEW WITH JAMES F. RYDER 103
SOME OF THE NEEDS OF THE HOUR. By A. G. Marshall 104
THE RECENT EXHIBITION AT DETROIT. By Prof A. H. Griffith 107
PLATINUM TONED PRINTS ON PLAIN PAPER 107
STUDIO BUILDING 108
CARBON WORK 109
BOYE & HABERNICHT 113
PAPERS FOR PROFESSIONAL PHOTOGRAPHERS. By John A. Tennant . . 116
LARGE HEADS DIRECT 119
LETTERS TO JACK—AND THINGS OLD AND NEW. By Edward L. Wilson . 122
THE STRAUSS STUDIO DESTROYED BY FIRE 127
CARAMEL FOR PLATE BACKING 129
LIGHTING: ITS IMPORTANCE IN PHOTOGRAPHY. By T. M. Armstrong . . 130
A CIRCULATING INTERSTATE EXHIBIT 133
THE NEBRASKA CONVENTION 134
ARTIFICIAL ILLUMINATION FOR ENLARGING. By C. Welborne Piper . . 135
THE PROFESSIONAL AND THE AMATEUR 137
THE IOWA CONVENTION 141

OUR PICTURES:

Portrait of a child. Negative by Boye & Habernicht, San Francisco. Print on Special Rough Velox Paper.
A combination group. Engraved from a photograph by Van Loo & Trost, Toledo, O.

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Before I came to this country I read most of the photographic magazines published in Europe, but for the professional I am sure there is none so good as yours

L. ALBERT,

Perth Amboy, N. J.

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is the best of all magazines for the photographer, publishes the practical experiences of the craft, is illustrated with the best work of the year, and gives the photographer the most for his money. Subscription price, per year, Three Dollars; with *Mosaics, 1900*, $3.50; with *Mosaics* and *How to Enjoy Pictures*, $5, postpaid. Put a $5 bill in an envelope, with your business card, and mail it to-day, to

EDW. L. WILSON, 289 4th Ave., New York

WILSON'S

GRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON

MARCH, 1900.

NEW METHODS IN FORE[illegible]

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PORTRAIT OF A CHILD

BY BOYÉ & HABERNICHT, SAN FRANCISCO

PRINT ON SPECIAL ROUGH VELOX PAPER

WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

VOL. XXXVII. MARCH, 1900. No. 519.

OLD vs. NEW METHODS IN PORTRAITURE.

We offer herewith the second selection of answers to our questions to the craft, touching "old" *versus* "new" methods in portraiture. These expressions of opinion are decidedly interesting, and, thus far, seem to offer equal encouragement to those who follow both ways of working.

A prominent photographer upbraids us for speaking of the work of such men as Steffens, Falk, and Gutekunst as "old-fashioned, straightforward portraiture." We hasten to explain that no slur whatever was intended in our classification. By "old-fashioned," we mean in the manner or style which has prevailed for many years. By "straightforward portraiture," we mean portraiture which is as good as can be made by direct photographic methods, unmarked by peculiarity in handling, a portrait, in other words, which is plainly a photograph, not an imitation or simulation of something else.

Ed. W. P. M.

PLAIN PORTRAITURE.

My patrons are among the very best of our citizens, people of culture, and are thoroughly acquainted with work of best photographers here and in England. I find a good lighted picture, not too much on any given plan, is what is preferred. The Hollinger school is good for some old person or for exhibition, but from a pure business stand-point would be of little use for general all-round work. My belief is when an average person wants a photograph he wants one, not a distorted inaccurate attempt to produce in black and white what the "Old Master" they wish to follow produced by marvellous blending of color in light and shade.

Yours, faithfully,
Emily Stokes, Boston.

USE BOTH METHODS.

I think the method of making photographs by the new method is more advantageous because it is on the correct principle, and it is possible by this method to make what *you* call plain straightforward work. From a business stand-point, I am inclined to lean toward the fine beautiful work of the Steffens order. There is no question about the cause of the great advance of photography toward high art. It is *certainly* owing to the "new school" work.

In view of my opinion you may think it strange that I do not make more of the fine order of work. My principal reason is that I am thoroughly in love with the other, and can make a good living having, intelligent and artistic people for customers.

My advice is to make both kinds, using good judgment in the style you sell to the customer.

Henry H. Pierce, Providence, R. I.

STRAIGHTFORWARD PHOTOGRAPHY.

In my address at our last Chautauqua convention I gave my views on the subject of photography. I have not changed my opinion since then, and I am greatly gratified to find I am upheld by other photographers.

Yours, truly,
F. W. Guerin, St. Louis, Mo.

A CLEVER ANALYSIS.

MY DEAR MR. WILSON:

Your note certainly deserves an answer, but the whole subject of photography is so "mixed" of late that it will be very difficult, in a short letter, to give my opinions even if they could be of any help to you. With such men as Hollinger and Appleton the above "mixed" condition has nothing to do, for they are men of brains, who know *why* they do everything they produce.

It seems to me that there are three classes to-day: first, the straight photographer, like Steffens, who, even *as* a straight photographer, is up-to date, alive, and progressive, and also a good business man. I do not choose names to be in the least personal, but, as far as my knowledge goes, he is an example of the class I mean, at any rate. I refer to his ability to make beautiful chemical and photographic work.

Then there is the straight photographer, who *was* and *is not;* but whose conceit, *because* he *was*, keeps him complacently thinking that he *is*. I might name an example, nay, many of past international reputation, but it would only offend, and I am not writing for that purpose. They are simply shelved, back numbers, and, of course, are bad business men, many not being worth a dollar to-day.

Still, again, there is a class as absolutely distinct from the first two as a class could be, and yet use a dry plate and a camera—the class that simply use good plain common sense and do their own thinking. It does not seem in the least egotistical for me to state the fact that, as far as my knowledge goes, I was the first in this country to use platinum paper exclusively; to throw away my diaphragms, my head-rests, etc. (my scenic backgrounds I never owned to throw away), in fact, to discard everything pertaining to bad photography, and to use my camera as a *means* to an end, that end being the putting my knowledge of art and what the best artists would do with a subject into photography as far as the mechanical limitations of photography would allow. For instance, if a painting (a portrait) comes before a jury in an art exhibition and the lines of the head are crisp and hard against the background, it would be thrown out as bad, no atmosphere, etc. So in photography, we can bring out the character of the head and yet let the unimportant lines be indefinite, "lost and found," as the painters would say.

Hollinger was the next man to "set up shop" along these simple lines and do his own thinking, and he does not in the least content himself with following me. He spent a forenoon in my studio, just before he went to New York; so did Appleton. I talked with them freely, because they are broad-minded, above all photographic jealousies, and are men of brains; I respect them as men and as artists, for they are not photographers in a sense. We do not evade or resent the "photographer" being applied to us. I say on my letter-head "photography," pure and simple; but in distinction from the man who has no knowledge of what art is, we are *not* photographers, we *are* artists.

Now what you really want from me is what I think of "freak" photography. I think it is bad, just as I think in half the art exhibitions of paintings about 25 per cent. of the things hung are as bad as they can well be. So will the best artists agree to this last. The impressionism in art mixed people (and the young students) all up, so they did not know where they were at, and yet the best men and women in the school of modern art know *exactly* what they are doing, and cannot you imagine their amusement at the bad stuff made by some of the young artists (and old, too) who half grasp the truth of what they are doing? The would-be imitators who only half gather the ideas, get it into their heads that if impressionism is the fad, any old thing that is "different," and "odd," and "queer," and "interesting" (?) will go.

So in photography. Few understand to-day what they are doing. Some of the young women have done excellent things. They bring natural culture and refinement to their work, but are hampered with lack of ability in the chemical and mechanical, though very *necessary* parts of the work. The almost amusing part is that Hollinger and Appleton and myself work more *simply* than your "straight" photographer has *ever* done. No distracting lines and accessories—simple effects, allowing the *character* of the sitter to be *the one thing* portrayed. In art, or oratory, or literature, or what not? the simple things are always

the best. The most picturesque and odd things—and the most effective—can still be simple, all the *more* effective because simple.

So do not lend your influence any more in your journal to berating the best men and women in photography as "freaks." Hit the imitator who does not know where he is *at*, all you like, but Hollinger is no more a freak than any man of brains who does his own thinking. The work of such men is *termed* freak by some others who are getting left and do not understand how to keep up.

One of the oldest and best known operators in this town said a few years ago that "Harris was crazy and with no knowledge of art." I never had a more direct or flattering compliment considering the standpoint of the source of the remark.

Sincerely,

Clayton Stone Harris, Philadelphia.

FAVORS GOOD PHOTOGRAPHY.

Replying to your inquiry, I am most decidedly in favor of good "straight" photographic portraiture. The "freak" method has had its day here in Chicago; I look upon it as a disgrace to the profession.

Francis A. Place, Chicago.

PLAIN GOOD WORK.

In my opinion the plain straightforward portraiture is the most advantageous from a business point to the majority of photographers. While a few will prosper with the so-called "freak" photography, yet the *majority* could not make their "salt," and as far as the advancement of the art is concerned, I think those who strike the happy medium are ahead on that line.

Edgar E. Seavy, New Castle, Pa.

THE PUBLIC AGAIN.

We find that the majority of our customers like straight portrait work; they like to see other faces made with so-called "freak" lightings, but when it comes to themselves they will take straight portrait lightings, because they see themselves and others in the ordinary light, and that is the way they like to be seen. The younger people do not care as much as the older ones. Nine cases out of ten they will select the straight lighting in preference to the "freak."

At the door we have some of the fancy lighting mixed in with the straight portrait lighting. It attracts attention and helps to draw business, showing the public that you are up to date.

Rogers & Newing, Binghamton, N. Y.

THE "NEW" IS ARTISTIC AND PROFITABLE.

I find your inquiry a hard one to answer, particularly so as I have been working on both sides of the fence of late. You will always find a certain few who will go to extremes in most anything they undertake, and to their work the name "freak photography" is most happily applied. About half of my work is made on the "new school" or "modern portraiture" order, and I cannot recall a single instance where that style of picture failed to sell and at a better price than I get for the "plain straightforward" or "old-fashioned" style of picture you speak of. I think the "modern method" the thing, speaking both from the artistic and monetary point of view, and, furthermore, I believe that that style of portraiture has taken the art of photography a couple of notches higher in the arts.

D. Rosser, Pittsburg.

THE "NEW" ARTISTIC, THE "OLD" PROFITABLE.

We think that from an artistic standpoint the principles of the new school of photography are far advanced over those of the old school. It deals with broader ideas and with ideals, while the chief end of the old school seems to be attained by mere mechanical means—fine chemical effect, fine retouching, general "slickness"—which is antagonistic to artistic sentiment. We believe that from a commercial point of view the old school has the advantage, generally speaking.

Homeier & Clark, Richmond, Va.

PATRONS PREFER THE "STRAIGHT" PHOTOGRAPH.

When the "freak" effects began to come in we made two plates of each sitter, one in the old style and one in the new.

We did not go to extremes, but used a strong focussing light, giving strong lights with strongly marked shadows.

In a very large proportion of cases the

"freak" was passed by some without comment, and some with remarks that made us wish we were in some other business.

So, in general, we are making the old style, what our patrons seem to care for.

One cannot judge of the general work of many of the new school by their work in conventions, for much of it is made to please the judges, while in their studios one will find much of the old-time work.

We find that more call for simple effects in backgrounds and inposing, showing that the lever is working and giving hope for the future.

Whitney & Son, Cambridgeport, Mass.

THE LIKENESS.

In my opinion, there is nothing better than the faithful portraiture of a subject, representing it as it is rather than as it may be imagined or distorted to appear, and nothing else is as good. This may be called "old-fashioned," but changes are sometimes the reverse of improvements.

R.

STRAIGHT PHOTOGRAPHY.

First, last, and always have I followed the true principles of photography, a sharp, distinct, clean-cut negative, from which to make a proper print, the finished result to be consistent with good (not "freak") photography.

J. Ed. Rösch, St Louis.

THE "OLD" AND "NEW" MERGING.

I have always supposed that "freak photography" was represented by those who made the underexposed, unretouched, and overdeveloped style of portraiture, who used for subjects "the halt, the lame, and the blind." But, of course, this interpretation would be as unfair to the new school as to go to extremes the other way, so leaving *individuality* out of the matter, I have concluded that the progressive photographer of either class produces pictures very similar in quality and beauty, and in each are represented skill, originality, imagination and so many of the requisites pertaining to art.

Such progress has been made within the last two years that in my estimation the two schools are merging into one, and this one school is the one to advance the standard of portraiture as an art, and bring success to those who diligently and systematically follow its teachings.

John H. Kemp, Scranton.

THE "NEW" AN ENTERING WEDGE TO BETTER THINGS.

I think there are good fields for both "old" and "new" methods. At present I believe there is more money in the "old" method, but consider the new school the entering wedge to higher and better art in photographic portraiture. I refer to the new school, in its purity, not to the genuine freaks perpetrated by so many aspirants of the new.

Charles P. Marshall, Cazenovia, N. Y.

PREFERS THE "GOOD OLD" WAY.

I always try to adopt all "new things" that are good; at the same time I also try to hold on to all the "old things" that I *think* are better than the new. I have seen many specimens of work from the studios of the advocates of the "new methods" that I would not have permitted my customers to take from my gallery twenty years ago. And I have seen plenty of their work that looked to me very much as if a novice had made it without pretensions of lighting at all. I think certain localities (with the right man back of it, say Fifth Avenue, New York, with Mr. Hollinger as the right man) could and are made to pay for a time. But even these are only for a short time. The people (who are looking for new "crazes") will desert him and rush to the latest "fad." I say this with all due regard to Mr. Hollinger, whom I respect as a gentleman and fellow craftsman. I think the good "old reliable," "up-to-date" progressive photographer will win on the "homestretch," both as to work of a high order and artistic merit and in a successful well-established business.

A. L. Jackson, Tacoma, Wash.

Composition.—The three rules of selection and composition are: (1) Attend to the foreground; (2) attend to the foreground and middle distance; (3) attend to the foreground, the middle distance, and the extreme distance.

THE P. A. OF A. EXHIBITION AT MILWAUKEE.

It would seem especially fitting that the Photographers' Association of America, the official spokesman of the profession, should uphold the dignity of American photography. That portrait photography is rapidly advancing is well known. Its artistic capabilities have never been so well understood and acknowledged as they are at the present time. It has been a matter of regret to many that the average of the work exhibited yearly at our conventions is not of as high a standard as we should expect to see when we consider the high average skill of the American photographer. It may or it may not be due to the policy of scattering medals broadcast; of permitting one standard of excellence in one locality and another standard in another locality. If a national association means anything, it means a common meeting-ground, where all compete on an even footing—a manifest impossibility when geographically divided. The most important issue, however, is, shall the Association stand for all that is best and most elevating? It can have no lasting influence otherwise. Its yearly exhibitions should be and must be representative of the progress of the year. It should be able to say to its members: Here are the practical ideals of photography; you must come to this fountain-head if you want the true knowledge. To turn from generalities to something specific, let me say that in providing for a hanging committee to pass upon exhibits the Executive Board have added mightily to the dignity and prestige of the national association. Who can gainsay the added interest of such an exhibition to the visitor and the greater opportunities it offers for study? It is unfortunate that much of the talk and discussions relative to the "new" and the "old" schools, and the sneering allusions to "freak photography," have made it appear that many of our best workers are opposed to the artistic advancement of portraiture. A most erroneous impression. Possibly some of the flings at "freaks" have been inconsiderate; certainly they have been justified by some of the "attempts" of the would-be reformers. It is the fool-friends (as usual) of the new movement who have made all the disturbance. Some very able lectures or "talks" have been arranged for as a feature of the forthcoming convention, and they will be prepared for the especial purpose of throwing light on that much-abused question, How to apply art principles in photography. Never has the Association had so commodious and convenient a building for its purpose as the Exposition Building at Milwaukee. It contains a series of art galleries, with top-light, in which the exhibits will be hung. Pictures will be judged by daylight, a fact that exhibitors will do well to bear in mind. It is the earnest desire of the Executive Board to have the National Association the exponent of all that is best in American photography. We appeal to all who are in sympathy with us for your exhibits and your presence.

Geo. B. Sperry,
First Vice-President P. A. of A.

Toledo, Ohio.

"DO IT NOW."

Pick out the class you wish to exhibit in and make your exhibit for the forthcoming convention of the National Association. This is our twentieth anniversary; let us make it the best convention we have known. Never has there been greater promise of good things than now. We shall have at Milwaukee the best facilities to show our pictures that can be devised: an art gallery constructed with top-light, where each and every exhibitor has an equal showing, and room enough for all; for the manufacturer and dealer we have ample floor space, and so located that none can pass him by, and ample space to show all his wares. Come and see the latest and best devices to help you make artistic, money-making pictures.

We shall have a separate meeting-room, free from the noise and confusion of conflicting business, where we can transact our business and listen to talks by special-

ists and art critics, who will give you practical illustrated talks on art lines as applicable to photography. And then we are invited to visit the Layton Art Gallery and enjoy its rare treasures and see the beauties of the world-famous collection, under the able direction of the curator, E. C. Eldridge, who will give a talk on the paintings displayed. We are also to have the triumph of the century—color photography practically demonstrated by the International Color Photo Company. These and many more are the attractions we offer. Come, and we will do you good.

J. GEORGE NUSSBAUMER,
Secretary.

512 MAIN ST., BUFFALO, N. Y.

THE CHANCE PICTURE AT THE PHILADELPHIA SALON OF 1899.

BY W. B. SWIFT,
PRESIDENT HARVARD CAMERA CLUB.

OF this exhibition one might write volumes. I take time, however, to but briefly touch upon that feature of it from which I sincerely hope at least a little good may come. I speak of the standard of acceptance. In doing this I fear I shall have to be uncomplimentary, where it is easier to praise; but I fail to see how to avoid the disagreeable task when the advance of the new fine art is retarded and the art itself degraded by keeping the facts I have any longer; and I take it we all place the progress of this new fine art above all other possible considerations.

The point, then, in the matter of acceptance at the Salon is that honors of acceptance have been awarded to men whose pictures are the result of chance. I have been watching the subtle prize-taking power of chance pictures for some time, and never even thought of finding any in the Salon. But things I saw and facts I found suggested the presence of the parasite of true photographic art—the "chance" result. I could hardly believe it. Chances had I seen before, that took awards, awards at exhibitions where apparently the only things that had any art were the result of chance, and to award any prize here the "chances" must have them. But at so grand and great a show as the Salon, to see this insidious foe, even here, creeping in, was hardly to be believed. I thought if "chances" received honors here the matter was being carried too far. So I took the next step. I asked the exhibitors. Is this a chance picture? Is that a chance picture? And thanks to their honest souls, they said they were. These men and women made the way easy by this frank acknowledgment. Even the finding of only one chance picture in such a place is reason enough for the revision of the standard or method of acceptance, but I found facts indicated that the chances were shockingly numerous.

However much I may try to advocate a truer art and hope for a speedier progress, it is not for me to dictate. But it seems possible, therefore, that there may be a higher standard of admission to the Salon —a standard that would, through investigation, unreservedly exclude those often occurring "chance" pictures that anyone, no matter how utterly ignorant of art laws and absolutely destitute of artistic appreciation and feeling, as well as wanting in execution, can by some technical mistake stumble upon. If a man presents ten pictures from his whole life's work, and only one shows artistic feeling and execution, the weight of probability points to that one picture as a result of mere chance—only a *happening* that proves absolutely nothing as to the ability of the maker. The vital question is, Should this sole picture be honored by acceptance at the highest tribunal of art in this country? thus stamping a man an artist simply because—as the Salon announces as its purpose—it has "distinct evidence of artistic feeling and execution" before it is reasonably certain that said picture is the product not of chance but of a trained mind and a sensitive heart. Should not the purpose rather be exalted to the exhibiting of that class of work *only* that shows by *numerous* and *varied* examples of the application of art laws that the maker is an artist? Surely if we do this many will have to go. But for the New Fine Art's sake, let us clear the ranks. In photographic art, number is the test of skill. Where the exhibitor cannot be personally

questioned it is the only test of skill and ability to apply art laws. If a man presents twenty pictures that show artistic composition, it is reasonable to suppose him an artist. If another presents ten, nine of which are merely matter-of-fact photographs and the remaining one quite artistic, it is reasonable to suppose—at least until investigation—that one a chance picture, and its maker not an artist. While it is often hard to tell the chance worker, little and uneven excellences indicate the fluke, and the final test is the production of a number of artistic pictures. In cases where we cannot tell we must ask the exhibitor.

I hope this appeal for a higher standard will settle the matter of chance pictures forever. The New Fine Art is too far advanced now, and the signs of the artistic are too obvious and too numerous to excuse prize awarding to chance work any longer. Henceforth let it be a matter of past history (what I have seen outside of the Salon) that judges award prizes to pictures whose owners had not gained enough art to know before the award that their pictures were of any artistic merit at all. I have seen this happen several times. Medals should be a recognition of personal ability, and a chance picture is nothing but mere sham; while the awarder of prizes to such without investigation is distributing unearned honors to those likely to be found unskilled in artistic treatment, unappreciative of beauty in nature or anywhere else, and surely uninitiated into the subtle effects of lights and lines—honors due only to that rare mind which, perhaps, after a hard-fought struggle, slow artistic growth, and long years of arduous thinking, has finally gained the new power to materialize his imagnation in pictures, and constantly lives in thought within that fascinating, ennobling, and educating upper world of art.

AN INTERVIEW WITH JAMES F. RYDER.

THE *Cleveland Leader* in a recent issue devotes nearly a page to an interview with "Cleveland's distinguished veteran of the camera, James F. Ryder, Esq., who made daguerreotypes in Cleveland when that city was a small town; who was the first American photographer to retouch negatives; who has photographed many famous people and aided several now famous artists. It is accompanied by a large portrait of Mr. Ryder, and supplies some very interesting reading, and gives none too much honor to our esteemed veteran friend. Mr. Ryder makes no claim to what is not his own, and always puts honor where honor is due. Among other things, he said to the *Leader* interviewer:

"Sometimes I have been sorry that I taught retouching photographs to America. Still, if I had not done it someone else would, and I would not have had the start of the rest of the country for a year, with all the advantage that meant.

"But retouching is deceitful, and I do not like it. Left alone, the camera will not misrepresent; but when a skilful retoucher takes the negative of the face of a woman who wants to be more beautiful than the good Lord intended, the result is not always the truth. The instantaneous dry-plate is another left-handed photographic blessing. It has made the whole world photographers and people are content now with snapshots which they and their friends make, and all there is for the photographer to do is to finish the plates for the amateur. If the amateur snapshotter gets a picture that is funny or cute he is satisfied, and photographic art is left out of the question.

"How different it all is from the old times, when people went to the photographer and had a daguerreotype taken and finished so that they could take it away with them. If they wanted more than one they sat for each picture they wanted and paid $5 or $10 for each one. With a boy to help me, I used to make as much money as the big galleries with a dozen employés do now. The history of retouching? It is very simple. For a long time I had been taken by the beauty of some portraits that had appeared in a Philadelphia publication devoted to photography.[1] I found that they all came from Germany, and that they were made from retouched

[1] That was this MAGAZINE, then published as the PHILADELPHIA PHOTOGRAPHER, and our old friend Dr. Vogel was the one who first woke us all up to retouching the negative.—ED. W. P. M.

negatives. A man named Cyranus Hall, who had worked for me until he had made money enough to go to Germany to study what he called nobler art, meaning painting, happened at this time to be in Munich, from where some of the finest of the retouched work came. I wrote him, asking him to send me a retoucher. He did so, and soon after the venture was so successful that I had him send me over two more. I was the first American to use the process, which is simply doctoring the negatives after they are taken, and smoothing over any defects there may be in the faces or in the lighting of the persons who are photographed."

SOME OF THE NEEDS OF THE HOUR.

BY A. G. MARSHALL,
CONDUCTOR OF THE BUREAU OF ART CRITICISM.

I HAVE been asked to write about my adventures in the field of photographic criticism—I suppose to describe in enthusiastic terms the *tours de force* of geniuses whom I have discovered and pushed on the way to glory, and to set forth with the *sang froid* of a Mark Twain the richness of presumable pictorial horrors previous to the process of merciful though savage annihilation, together with racy reminiscences regarding probable exchanges of personal photographs with sentimental lady amateurs. Well, most of the above subjects must be reserved for treatment in the Sunday newspapers of non-actinic hue when I get into the literary fake mill and my imagination is oiled up for routine production.

Coming down to facts, I can say that there is more need of instruction on art lines among photographers than I had imagined; those who apply for criticism as a rule are more anxious to improve, and take their medicine with a better grace than I had anticipated; and the work of criticising (through the post-office, at a safe distance) is more agreeable than I had expected. It is furthermore a pleasure to know that my work has afforded a measurable relief to the overburdened editor of this MAGAZINE; and if my criticisms have been more frank and my scalpel more freely used than his might have been, the result to the MAGAZINE has been at least to leave its subscription list intact. An editor is in a ticklish position when it comes to giving candid advice to professional individuals who may honestly believe that all they need is the recognition and approval of some one at headquarters to make their work go in the best circles like government bonds. When such a man gets a blow instead of a pat it is apt to hurt, and, if the experience is new, he is likely to resent it in the way he best knows how by simply stopping his MAGAZINE. Of course, he hurts himself more than he does the proprietor, but that is no consolation to the latter, who also lives to please and must please to live. So, unless the editor chances to be a millionaire philanthropist (fancy it!) his pen is tempted to "stultify" itself, as they say in the South of a man who votes the wrong ticket, and he writes in the interest of his pocket. Of course, he may nobly resist the temptation and suffer the occasional penalty, but at any rate it is wearing to his tender heart. For myself, I can plead straightout treatment of every print submitted to my judgment. The sending of prints with the small fee I take as indicating a sincere desire to profit by my best advice, which has always been and always will be given, with no more thought as to its effect upon WILSON'S MAGAZINE than upon the Bank of England. Old and solid institutions are not easily shaken by a breath. One or two friends predicted that the Bureau of Criticism would not work, probably having in mind their own experience with bargain-store "chiffonnieres." They said subscribers would resent the innovation, being accustomed to expect deadloads of advice and taffy free. But to the honor of the profession be it said that the want-something-for-nothing men disgrace its ranks rather less numerously than they do many other walks in life, and a majority of its members recognize a good thing when they focus upon it, even if it takes some time to get their achromatic-anastigmatics adjusted.

I would like to name some of the men

whose work submitted for criticism promises great things for them, so that, if they hold out and fall not by the way, some of the older matter-of-course great ones may have to hustle to hold on to their laurels. It would surprise the know-it-all artist of Smartalickville to see the names of several proprietors of flourishing studios in large cities who do not find it beneath their dignity to avail themselves of our Bureau of Criticism. It is through this and similar means that the great men become great and stay great. But for several reasons I must refrain from naming them. It might puff them up unduly; and conceit is known to be a particularly deadly foe to progress in art. Then those not named might be unduly discouraged; and despair is well understood to be at once fatal to continuance in any good work. And, more dire consequence still, so far as I am concerned, they would probably one and all stop sending for criticism—the one class fancying themselves above the need of it, the other imagining no use in following a hopeless pursuit. Then, again, like a doctor or lawyer or fortune-teller, I must not betray professional confidence. However, I will say for the general comfort that there is not one of my pupils in camera art who need be unable to make prize pictures after devoting a reasonable amount of study to it; and there is none who is or ever will be at the point where he can rest from further effort in the assurance that he has got it all down fine. Pictures have been published in this MAGAZINE, and more will follow, made by men who are among our most earnest pupils, already commencing to develop and fix their names in the temple of fame. I receive some prints in which it is extremely difficult to find any fault, yet with them, or following them from the same men, are invariably other prints showing the need of better understanding or more careful attention to points of vital consequence. To get the full benefit of critical instruction, not only should the best work be submitted but samples of the average thing that one is turning out and on which his reputation must rest, and particularly the things that he feels are failures but cannot tell just why and where. In a painting school the rule is to submit all one's work to the master's eye, instead of merely that which has been specially studied up. Often the latter are overdone, and something the student deems of little consequence may contain much of real merit; and in any case it is only from the whole drift of his effort that his progress can be certainly gauged, deficiencies helped, and actual value found.

Photographers as a class leave too much to chance, and do not sufficiently realize the command they have, or should have, over their materials previous to exposing their plates. It is a fair, yet startling, reproach against many that the nickel-in-the-slot tintype machines at Coney Island make just as good pictures as they do, and probably much more money.

I have three classes of work to criticise —commercial portraits, portrait studies and landscapes. On the commercial work several serious faults are very prevalent, not all of which are entirely chargeable to the artist. It is of course out of the question for him to prescribe and regulate costume in every case, as a painter of portraits does. And yet this should be not only his privilege, but his duty, and would be so if the general public possessed more taste. And let me say that the photographer has it in his power, if the required knowledge and tact are his, to educate the taste of his patrons more than can be done through any other one influence. Expression and character are usually caught fairly well. But there might be something more. If one knows how to do it, a distinguished portrait of plain Mr. or Mrs. John Smith can be put upon a cabinet card just as well as Sir Henry Irving or Miss Ellen Terry on a ten-foot canvas. The old Dutch painters could portray the stupidest fat burgher or ugliest old fishwife in a way that is the admiration of all time. And when the brushes of Rembrandt and Velasquez touched the most commonplace persons and things there was revealed a beauty all the more wonderful because it depended entirely on broadly stated truth and never on prettiness and flattery. Rembrandt was the great master of concentrated light, Velasquez of broad lighting. Both knew their materials as Paganini knew his violin. Their pictures are composed and painted in a grand, because simple and unaffected, manner, and they translate perfectly into black and white, forming the best examples for portraitists in any medium to study for composition and handling. Photographers

in general have much to learn in the matter of composition. Comparatively few seem sufficiently sensitive to beauty of line and balance of masses and contrasting spaces. Even in trimming their prints there seems to be a wide-spread uncertainty, for which again they may not be entirely to blame, as the conventional shapes of mounts have largely restricted them. But it seems to be like taking off a leg for some photographers to sacrifice a few details at the edges of their plates for the general good of their pictures. I have yet to see a negative that included too little subject, but thousands that take in too much.

The artist should know how to compose, and should always work with a mat of appropriate shape adjusted back of his focussing glass, and make his picture to fit it. What would be thought of a painter who put a picture at random on a canvas much larger than was desired and then depended on paring off the edges to make it fit the frame? Yet this is the way most photographic negatives are made. The painted scenic background and "accessories" are still too much in evidence in some studios. If one cannot make a picture of his sitter alone, all the importations of other objects will not help him. Not that I would exactly condemn "studio properties," but the abuse of them is sometimes appalling. Groups are almost always flat failures from an artistic point of view. Perhaps this is inevitable in commercial work, as each member of the crowd insists upon being "brought out" as prominently as every other one. Even where one can handle his group in the proper way the difficulties of arrangement increase fourfold for every extra figure added to the first. There is one way in which the solution of the problem can sometimes be effected without inequality of interest in the subjects. That is to treat them as elements in a decorative band or panel somewhat after the idea of a repeating ornament. This, however, requires good knowledge of composition in line and space.

There is much room for improvement in the refinements of lighting, so as to bring out the best of a face and keep the relative values in place. Not infrequently a hard outline is in effect several feet in front of the planes of a face. Retouching in forty-nine cases out of fifty is all at sea, and shipwrecked nearly as often upon the polished rocks of marbleized smoothness. A true artist can, with a very little retouching, correct such unkindness of the lens as is sometimes unavoidable with wrinkled or spotted faces, and help out deficiencies in lighting, timing and chemical work (though really there should be no necessity for the retoucher to correct failures of the operating and dark-room), and also can often help the expression. To do the latter he must understand the anatomy of the face and the muscles of expression, as well as the effect of light and shadow. The operator, who alone is familiar with the sitter, should do all retouching beyond that required for subduing defects.

The most encouraging sign is that in work done purely for study and the love of the thing, there is in almost every case much real merit, largely the result of feeling, though it be only tentative reaching for the right way. But it demonstrates capability that only needs direction and practice to do fine things. One or two words of caution are especially needed by the men who are thus earnestly striving. The great aim should be toward simplicity, and all effort after effects peculiar to other processes, as painting and engraving, and especially the imitation of the effects of time and accidents of handling in those media, should be avoided. Photography can stand squarely on its own technique, and must do so if it is to win recognition as a means of artistic expression. It is well to pose and light models and photo graph them in the attitudes of figures in masterly pictures, but only as a means of study. Never for a moment should it be imagined that the result of such imitation is in any sense an original picture or will pass for such among those the artist should be most anxious to impress. In landscape there is certainly much appreciation of picturesqueness in subject; less, but still some, of broad and grand effects as distinguished from hugeness. The selection and painting of skies is mastered apparently but by few, and the matter of just what to include in a picture by even fewer. There is so much reluctance to cutting off this sweet passage or that exquisite detail, although these may be but so many pretty flies in the cream. There is much to be learned in foreground work, which is largely under control of the artist, and also of the possibilities of hand work upon

landscape negatives, which rightly done is not "faking," but synthetic art, as witness the pictures of such a man as H. P. Robinson. In purely technical matters there is less room for criticism. One who knows his chemicals and avoids the smallest stop and the use of shining paper is not likely to go far amiss between putting the plate in the camera and washing the prints.

The chief needs of the hour seem to be a broader and deeper understanding of principles, less commercialism in the operating and work-rooms (with perhaps more of it in the reception-room), and more thorough attention to points, small in themselves, but which make or mar the result at last. And these are within the reach of all.

THE RECENT EXHIBITION AT DETROIT.

BY PROFESSOR A. H. GRIFFITH.

THE exhibit of the Detroit Camera Club I believe to be one of the best, if not the very best, exhibition of photographic art I have found anywhere. Not so large as some, it covered almost the entire field taken up by the amateur. Each one seems to have striven to put forth his very best efforts, and the Committee on Selection have certainly filled the rooms with choice bits of nature in almost every form.

To say that there were none bad would be putting it most too strong, but all were above the ordinary. Of course, landscapes were in the majority, as they always will be with the lover of nature, but there was better judgment shown in the selection of the subject, more attention given to the best point of view, and that poetic feeling which should find expression in all art work was recognized. The pictures were not the random shots of one who gives no heed to the time of day or composition, but seemingly each tried to catch nature at her best and in her sweetest moods.

There was no lack of life and vigor, but all bore the imprint of a refinement, the result of close study. Many of the pictures were new in the choice of subject, and the effects sought after often charming because of the honesty of purpose and the earnestness with which each worked.

I have been known as a fault-finder, and one who sought only to see the bad things, but a few more exhibitions like this one, and I will feel that my days of fault-finding are over, that in place of condemning I shall begin to commend; and to commend is pleasanter than to condemn.

Success to all such exhibitions. They raise the standard of excellence.

PLATINUM TONED PRINTS ON PLAIN PAPER.

A SIMPLE method of preparing plain salted and silvered paper, giving rich prints when toned with platinum is translated in the *British Journal of Photography* from the last number of *Camera Obscura*. It is brought forward by Franz Hofbauer.

Strong white paper is coated by means of a badger's-hair brush with a mixture of

Arrowroot (finely powdered)	10	grammes.
Salt	0.66	gramme.
Distilled Water . . .	33	c.c.
Carbolic Acid (pure) . .	6	drops.

This mixture should be well shaken before use till the whole of the precipitate is suspended. The brush should be kept about half-full of the mixture, and the paper brushed over in all directions, so as to obtain as even a coating as possible, and, finally, all marks evened out with the damp brush. Any streaks faintly visible after drying will not matter, as the important thing is not so much an even coating as an even damping of the paper. The paper should now be allowed to dry spontaneously, without heat, in a place protected from dust; it should be left to lie flat for twenty-four hours.

In order to sensitize this paper, the two following solutions should be prepared:

A.

Silver Nitrate . . .	5 grammes.
Distilled Water . . .	25 c.c.

B.

Citric Acid	5 grammes.
Distilled Water . . .	25 c.c.
Carbolic Acid (pure) . .	6 drops.

Mix immediately before use just enough of these solutions by pouring one part of solution B into two parts of solution A. The paper should be supported at an angle of forty-five degrees, and fastened down by the corners with sealing-wax, and the sensitizing solutions painted across it from left to right without pressure, so that the streaks of the liquid shall run into one another. Metal pins must not be used, nor should the brush be fastened with metal.

The sensitizing solution will gradually become cloudy from the chloride and arrowroot taken up from the surface of the paper by the brush, but this is of no moment, if the brush be not dipped too far into the liquid so as to disturb any precipitate.

Thick, rough papers, as a rule, require more coatings than thin, smooth ones, though a good deal depends upon the kind of paper.

The sensitized paper should be allowed to dry spontaneously in a place free from dust, and, as a rule, paper sensitized at night will be ready for use the next day; it will keep longer, but better results are always obtained if it is used at once, and the freshly prepared paper is always slightly damp, which is in favor of the prints.

The finest prints are obtained from tolerably plucky negatives with the following platinum bath. The paper should not be much over-printed, and then washed for about half an hour in three changes of water and then treated with the following:

Potassium Chloro-platinite .	1 gramme.
Distilled Water . . .	300 c.c.
Nitric Acid (pure) . .	20 drops.

The prints will turn first reddish-brown, then violet-black, and finally black. Toning should only be carried to the violet-black stage, then washed and fixed in a 10 per cent. solution of hyposulphite of soda for a quarter of an hour, and then well washed and dried. Grayish-black tones are thus obtained. If toning is carried on too long the whites become yellow.

If, when dry, the prints do not show a fine gray and the whites are yellow, they may be toned in the following bath:

Ammonium Sulphocyanide	10 grammes.
Sodium Phosphate . .	12 "
Distilled Water . . .	250 c.c.
Solution Chloride of Gold (one per cent.). . .	30 "

STUDIO BUILDING.

ALMOST every day we receive requests for information about the building of studios. There are going to be quite the usual number of studios built during the next two months, and to judge from our correspondence many builders appear to have commenced work without having fairly sized up either the cost or the construction. One man writes that he has commenced work, and that he wants to know whether a north light is necessary; another one has his framework all erected and the sides clapboarded, and now he wants to know what kind of glass to use. This matter of glass is one which has caused much questioning since the beginning of photography. In 1840 a patent was taken out for the use of blue glass, and for long years many people had an idea that blue glass would give the greatest amount of actinic light. Now we have got rid of that idea, and use colorless glass. Which is the best glass—clear, ground, or ribbed? The reason for using ground or ribbed glass is that it softens and diffuses the light. A passing cloud or wisp of smoke in the sky may throw a distinct shadow, and this will be modified with the ground glass. Ribbed glass does perhaps diffuse a little better than ground glass. The question of the north light is now settled. For straight everyday work the most constant light is the best, and this light is obtained from the north.

Where photographers are most likely to fail in building is in strength of construction. It is a mistake to suppose that a glass house must be a flimsy house. Build it strong. Make the sash bars sufficiently stout to stand rigidly against any storm. Let the eaves and the ridge be so strong that you can place a ladder on them and climb on the roof to clean it. Don't have such a slender frame that when the glass is dirty you have to use a mop or a broom spliced to the end of a fishpole in order to do your cleaning. A house which is not rigid always results in leaks. A storm beating against a skylight will make it "give" or bend inward to every gust, or

a weight of soft snow will bend it. This means cracking of putty and paint, and when the next rain storm comes beating up the wet comes dripping through the roof. This is a thing to be avoided at any price, for soiled curtains or shades or carpets don't improve the appearance of a studio. On another page Paul Clare speaks of the value of good books. There is a little book on studio construction, written by a man who understands his business, which should be carefully read for pointers by anyone who thinks of building.[1]

The question of sound solid construction is important because it is so often neglected, although often insisted upon by writers. On this subject recently a writer in the *British Journal of Photography* says:

"There is no doubt that one of the most important points in connection with studio building is too frequently overlooked, namely, rigidity and stability. As a rule the sash bars are too slight, and the plates at the eaves and the ridge are not stout and rigid enough, as these must be considered the real foundations of the glazed portion. Of course, the larger the building is the more substantial should be these foundations, particularly the ridge plate, which is really the backbone, so to speak, of the structure. Therefore, in the studio building great stability should be insisted upon from the builder. It is always advisable to have the glass in as large panes as possible, as then there will be fewer laps and less sash bars to keep painted and otherwise in order. Then stouter sash bars will necessarily be essential, but one stout bar will obstruct less light and be less dazzling to the eyes of sitters than two or three slender ones.

"The glass used for the roof should be thicker than that which will suffice for the sides, in order to avoid injury by hail storms. It should be selected and fitted with judgment, for sometimes it is slightly curved in parts, and it follows that if two squares which are in this condition are fixed with their curvatures in opposite directions there will be a wider intervening space where they overlap to harbor dirt or permit of water being blown through in wet weather. Before glazing, the sheets of glass should be painted on each side, along their edges, with good oil paint, the width of the rabbet of the sash bar, or a little more, as then the putty will the more firmly hold to it. The putty used is of great importance, and should be well looked after. It should be made with the best linseed oil, instead of the cheap common oils which are generally used in ordinary commercial putty.

"When a new studio is built it is well to make provision for conveniently and safely painting or repairing the outside, as occasion may require. If small angle irons be secured to the astragals of the roof, they will prevent a board placed thereon from slipping; otherwise the usual plan of driving nails or screws into the bars will have to be resorted to, and thus cause fresh risk of leakage, when repairs or renovation become necessary."

CARBON WORK.

THERE is one question which is at one time or another asked by every one of our first rank photographers: "Where can I get a really first-rate carbon printer?" Carbon is becoming more and more the accepted thing for high-grade work, and the good carbon man can command his price. Among the many questions which come to us, those referring to carbon are by no means the least numerous. We have repeatedly published the method of working, which is not, in practice, difficult. The difference between good and moderate results is traceable to the amount of care and intelligence bestowed on the work, with a keen appreciation of the modifications required to meet changes of temperature or other local conditions. One of the best accounts of the carbon method was that given some little time ago by J. A. Sinclair, and a few extracts from his paper will interest our readers.

Though sometimes considered as a modern discovery, it is quite forty-seven years ago since Fox Talbot used bichromated gelatine for coating copper plates, and produced the first photogravure, and this, in turn, was fifteen years after Mongo

[1] "The Photographic Studio," by Bolas; published by Tennant & Ward. Price, $1.25.

Ponton had first discovered that paper soaked in bichromate of potash was sensitive to light. Two years after Fox Talbot (in 1855), Poitevin, who may almost be called the father of the carbon process, commenced his experiments, but with little practical result. In 1864, Swan commenced his single transfer process, and made carbon a commercial possibility.

Since that date the process has been modified and improved in endless ways, carbon tissues of various kinds and tints being readily obtainable commercially. In this country it is usually sold unsensitized, and must be sensitized before use.

To sensitize the tissue, it is immersed in a 5 per cent. solution of bichromate of potash for three minutes in winter or two minutes in summer. Care must be taken that the temperature of the solution is not over 60° F. The tissue when withdrawn from the bichromate bath is squeegeed into contact with any smooth surface, such as zinc, ferrotype, or glass plate, then withdrawn and placed film upward upon a sheet of blotting paper laid upon a piece of card which has been bent into a half-circle. When dry the tissue is ready for use. Before printing it is necessary to prepare the negative by making what is called a safe-edge. This is done by placing an opaque mask on the glass side of the negative or a semi-opaque one on the film slide. Sometimes a band of black varnish is painted all round on the glass side. A very simple plan, and one that I usually adopt, is to stick a lantern-slide binder round the edge of the plate. The object of this safe-edge is to prevent the film coming away from the transfer paper. If a dense shadow comes right up to the edge of the print it is likely to get washed away by the water getting under it, unless the edge is gradually vignetted off. Such dense shadows, being composed of insoluble gelatine of considerable thickness, are only lightly attached to the support, and consequently it is necessary to have an edge of more soluble material which holds with greater tenacity to the support, and at the same time offers a more gradual resistance to the water.

It is evident that we must have some means of gauging our exposures, for the progress of our print cannot be told by looking at the very dark-colored surface of the tissue, and for this purpose various actinometers have been devised. Having decided what number of tints we must secure in our actinometer, we expose both it and the printing frame with the negative in contact to light at the same time. For the first print it may not be quite easy to know how many tints the negative will require, but a little experience will soon get over the difficulty. When the actinometer has given us the number of tints we think necessary the printing frame is withdrawn.

Now let us think what has been the action on our pieces of printed tissue. A certain amount of light has probably come through all parts of the negative and covered the gelatine surface with a thin insoluble film. Through the more transparent parts of the negative, such as the deep shadows, the light has acted strongly, and in the corresponding portions of the tissue there is a thick film of insoluble gelatine. In fact, the thickness of the insoluble gelatine is in exact proportion to the amount of light which has passed through the negative. This insoluble film being on the surface of the tissue, if we were to attempt to develop it the image would float off the paper support and be lost.

We must, therefore, transfer the image so that the insoluble portion, which will ultimately form the picture, remains in contact with a temporary or final support during development.

In the single transfer process we immerse one of the specially prepared sheets of paper in water some little time before we intend squeegeeing the printed tissue in contact with it. Whatman and other thick rough drawing papers should soak for some hours, or they may be immersed in hot water for twenty minutes till all the air is driven out of the pores of the paper. The transfer paper being ready we place a piece a little larger than the tissue in a dish of cold water, in which the printed tissue is also immersed; when the tissue begins to flatten out, it and the paper are removed from the water together and squeegeed into intimate contact by means of a flat squeegee. After remaining under pressure between blotting boards for ten minutes (or, if a thick rough transfer paper is used, for twenty or thirty minutes) the tissue and support are immersed in hot water at about 110° F. When the gelatine begins to ooze out round the edges the back surface of the tissue is pulled off,

and the print on its new support is developed by laving with hot water. It is advisable to have a sheet of glass in the developing tank, on which the print may be laid, and the warm water may be poured from a jug or measure on to the surface. Dark shadows may be considerably lightened by pouring hotter water from a greater height on to the print. Under-exposed prints may be modified somewhat by developing in cooler solutions.

It should be borne in mind that the print is a little darker when dry, and it must therefore be developed rather lighter than desired in the finished picture. After development the print is rinsed in cold water, and then placed in a 5 per cent. solution of alum, where it remains until the yellow tinge of the bichromate is removed from the paper. A rinse in cold water completes the operation, and the print is hung up to dry, after which it may be trimmed and mounted in the usual manner. For double transfer we proceed exactly the same as for single transfer, except that we develop the picture on a piece of finely smoothed opal or one of the flexible temporary supports which are artic es of commerce. Whichever temporary support we decide on using it must be coated some time beforehand by rubbing a few drops of solution over its surface, composed of:

Pure Beeswax . . .	2 drachms.
Yellow Resin . . .	6 drachms.
Turpentine	1 pint.

Some minutes after applying the waxing solution any excess should be polished off by rubbing a clean cloth in a circular motion all over the surface of the support. These supports may be kept coated ready for use.

The image being developed on the temporary support may be transferred at once or left till dry. The latter is perhaps the best plan, as there is then no danger of damaging the film when squeegeeing. Paper coated with a film of partially soluble gelatine is sold for final supports, and a piece of this is immersed for half an hour in a 2 per cent. solution of alum. It is then placed in clean water with the print on the temporary support; the two are brought together, care being taken to avoid air bubbles between them, and after withdrawal from the water are vigorously squeegeed. Place between blotting boards for twelve hours, and then remove to a well-ventilated room. The print will, after some time, detach itself from the temporary support and be found on its new surface ready for trimming and mounting

NEWS AND NOTES.

Plate Backing. J. H. Baldock, an expert photographer of interiors, suggests a backing for plates which he considers superior to any caramel backing.

It is easily made, easily applied, cheap, and clean. What more is desirable?

Transparent Celluloid . .	80 grains.
Acetone	3 ounces.
Amyl-acetate . . .	1 ounce.

Mix and allow the celluloid to dissolve. This is the foundation of the backing, giving a white film. It may be colored yellow, orange, red, or black, or a mixture of yellow and red, or orange and red, could be used, by dissolving about two or three grains of those aniline colors in the solution of celluloid.

The colored solution thus obtained is then flowed over the plate, as was done in the samples sent, or brushed quickly over with a flat dusting brush, laying the plate flat on a piece of pure white paper. When quite dry (if put on over night, it will be dry in the morning) it can very easily be peeled off in one piece by first running the point of a penknife along the edge of the plate. It should be applied freely, as the thicker the film the more easily it comes off; but should it tear, and little pieces be left along the edges, do not try and remove them till the plate is fixed and dry, as they will do no harm.

Old vs. New. The experience of Harold Baker is an interesting contribution to the question of old *vs.* new. With a strong leaning toward pictorial work, and with considerable artistic skill, he naturally preferred "new" work, but he was forced to the conclusion that the general public would have the "usual thing," and would not have anything else. In the provinces,

at any rate, there was little or no demand for pictorial portrait photography, and his customers had made it a matter of complaint that his portraits were more like pictures than photographs. The use of rational printing methods with matt surfaces was only slowly advancing, and many sitters were only persuaded to take them by being told that they were the fashion, although the old Adam within them would prefer the shiny surface. With one or two exceptions, no professional photographer would dare exhibit in his show-cases what he would send to the Salon, and he knew of instances in which work which sitters refused to accept had been hung at the Salon, and received highly favorable criticism; but, if the public prefer the "usual thing," why should not the photographer supply it, and put money in his pocket at the same time? Yet perhaps even the professional might feel there was something to be sought after besides dollars. His studio was of the pattern usual twenty-five years ago, and with no blinds, as he preferred to get varied effects of lighting by placing the sitter in different parts of the room. He advocated short exposures, and could not understand why so many photographers clung with a fond affection to the head rest. The golden rule with regard to posing was to do none, or as little as possible, and an accessory should never be used if it could be left out. With children, very little posing was possible: it was more a question of patience, fast plates, and a quick eye for seizing a pretty pose. As a rule, there were no more delightful sitters than the children of people of good position, but sometimes they were "a little wearing." Few photographers realized the great difference that could be made in the lighting of the face by varying the strength of the background. In practice he gave a much longer exposure when using a white background than when using one of medium strength, the proper exposure for a head against a white ground being probably three times as long as the lighting with a black background.

Coloring Prints on Fabrics. In a recent issue of the *Bulletin de la Société Francaise*, M. Villain suggests that when prints are made on silks or other fabrics they may be colored by painting them with pigments mixed with albumen; any pigmentary color in powder form may be used, and should be mixed with a 40 per cent. solution of dry albumen to the desired tint, and the print painted with it and allowed to dry, and then submitted to the action of steam for from twenty to thirty minutes, which coagulates the albumen and fixes the colors.

Very satisfactory results may also be obtained by using the so-called "lake colors," which are formed by the union of the colors with tannin or other mordants and acetic acid, and painting the print, then steaming, which drives off the acetic acid, and then dipping into a solution of tartar emetic, by which means a double compound of tannin and the coloring matter is formed, which gives very solid colors. The following formula is suggested, but the strength of the gum solution is not stated:

Hot Gum Water . . .	100 parts.
Tannin	10 "

dissolve, and when cold add

Acetic Acid	5 parts.
Methylene Blue or other Color in Solution	31 "

When alizarine colors are used, the tannin must be replaced by other mordants, and, as a typical formula, the following is given for red:

Water	100 parts.
Acetic Acid	50 "
Alizarine (40 per cent. solution).	15 "
Olive Oil	10 "
Starch	150 "

boil and allow to cool, and add

Aluminum Acetate Solution 12° B.	10 parts.
Calcium Acetate Solution 9° B .	10 "

Mix well and apply to the tissue, dry, and steam.

An Old Story. Here is an advertisement which has been running longer than many of us can remember, and which will be alive long after we are gone: "By sending us $1 you can have a beautiful three-quarter life-size photograph of yourself or of a friend. Send us your photograph (no matter what size), and for $1 we will send you an enlarged picture, which, in our opinion, is much superior to those for which artists have hitherto charged $25.

A COMBINATION GROUP.
By Van Loo & Trost, Toledo.

BOYÉ & HABERNICHT.

RECEPTION-ROOM: BOYÉ & HABERNICHT STUDIO.

Two years ago we had the pleasure of a call from two California photographers. One was our friend and helper, Mr. Frank G. Schumacher, with whose beautiful work our readers are thoroughly familiar. The other, whom we then met for the first time, was Mr. Otto Boyé, of the firm of Boyé & Habernicht, of San Francisco. During the conversation which ensued we found in Mr. Boyé a man of unusual promise, keenly alive to the possibilities in his art, progressive, eager for information, and modest about his work. Since that meeting we have watched his progress as a portraitist with much interest, and are glad to show a few examples of the work of his firm in these pages, supplementing those given in our January number.

The firm of Boyé & Habernicht is comparatively young, but has already won for itself a proud place among the photographers of the Pacific coast. The studio is well located, on Market Street, San Francisco, and caters to the highest class of patronage in that wealthy city. Of the equipment of the place our engraving of the reception-room gives an idea, necessarily inadequate and incomplete. The character of Messrs. Boyé & Habernicht's work is seen in our illustrations, and especially in the fine example of child portraiture which serves as the frontispiece of this issue. Taken together with the frontispieces of our January and February numbers, it completes a trio which, as examples of photographic portraiture of widely different classes of subjects, will, we believe, be difficult to surpass.

We take an especial pleasure in drawing attention to the fact that these three clever portraits come not only from widely separated studios, but also from the younger men, the new generation, on whom the future of the profession will depend. How worthily they play their part is seen in their work. In their success we take an intense personal interest, finding in it an abundant recompense for our long service in the lifting up of photography as a profession.

Messrs. Boyé & Habernicht attribute much of their success to their constant endeavor to place before the public what is new as well as good. Thus platinum, carbon, and gum bichromate portraits have long been leading lines in the work of

their studio. Portraits on rough etching paper, direct portraits of large size, dainty miniatures on ivory, and the like, hold a prominent place among their specialties. But their strongest point is the fine quality of their photography, such as we see in our frontispiece and in the two portraits engraved herewith. In these, as well as in that presented on another page, we have selected examples of their treatment of difficult subjects as affording clearer proof of their skill. Those who have attempted figure-work will appreciate the measure of their success. May their tribe increase.

Boyé & Habernicht.

We believe that the suggestion offered by these portraits, viz.: that the portrayal of the full or three-quarter figure lends a charm and dignity to pictures of women, is one which deserves the attention of the craft. The "craze" for "heads" has brought out some fine work, but there is little doubt that the photographer who can produce clever figure portraits will have a stronger hold upon the gentle sex than the portraitist who confines himself to the bust picture.

Boyé & Habernicht.

PAPERS FOR PROFESSIONAL PHOTOGRAPHERS.[1]

BY JOHN A. TENNANT.

L. THE POSE IN PORTRAITURE.

WE are discussing, very frankly, certain obvious weak spots in the professional photographer and his work—the things which keep him back from success. In my last paper I freely expressed the opinion that the weakest spot of all is the photographer's ignorance about his profession, and especially of the elementary principles of portraiture. This brought me a letter from a much respected portraitist, wherein he says that the word "ignorance" strikes him as offensive, and that I should explain what I intended by its use.

The word was not intended to give offense, but I am not given to using two words when one is sufficient, and ignorant simply means: without knowledge. My use of it was very plain. I said that a long experience in, and a thorough knowledge of, professional portraiture as it is done here and abroad tells me that the professional photographer is comprehensively and inexcusably ignorant—without knowledge—of the elements of his daily work. Will any one with a fair knowledge of professional portraiture deny the fact? Why only a few days ago I received a package of portraits of the officers of a certain State association—men supposed to lead the profession in their own State. There was not a portrait in the half-dozen worth a second glance—as a portrait. It is not pleasant to say such things, but facts are stubborn. As far as these portraits could tell, not one of those men had learned the A B C of his profession. And in them the ignorance was inexcusable. Of course, there are exceptions—photographers who know what is required in a portrait, and who have deliberately trained themselves to get what they want. Their work is not faultless, but generally free from glaring fault. Such a piece of work was that by Mr. Kough—the frontispiece of the January MAGAZINE. Spellman's "Old Man" was another—on totally different lines. Pierce's portrait of Captain Sigsbee (if you could see the original print) is another. You will get more good examples of professional portraiture in WILSON'S than in any other photographic journal on the face of the earth. But they are picked from more than a thousand examples sent in during the year!

Let us take up the pose as an element of photographic portraiture. The pose is usually the weakest spot in a portrait. Why? I cannot answer, except with the old opinion of inexcusable ignorance. How many photographers have tried to touch the bottom of the whole question of posing the subject? How many have said to themselves, Why do I pose at all? What do I seek, or what do I intend, when I attempt a pose? People do not pose in ordinary life; why is it *essential* that they should pose or be posed in a portrait? If a photographer will take these questions one by one, and answer them honestly and in a satisfactory way for himself, he will come out of the examination with more real knowledge of the pose than all his previous experience in "posing" has taught him. The questions will *force* him down to the A B C of the matter, and his work will not only be improved, but he will find his subjects a hundredfold more interesting than on the old basis.

Life is short. One could write a good book about the pose; but we will just run over the questions. Why pose at all? I remember a well-known photographer putting his finger on that question in a little book I published on the subject. Said he: "There is the solution of the whole matter: Why pose at all?" It was his opinion (and is yet) that the photographer should not pose at all. He has, indeed, taught this in his addresses at conventions. But he is wrong—lamentably wrong. He has reached a point where he can *see* when his subject takes a position out of which (by his system of portraiture) he can get a pleasing portrait. From this stand-point he takes the lofty view that posing—the deliberate arrangement of the subject—is unnecessary. Moreover, he has so cultivated his eye that he can recognize what is pictorially right and wrong in the natural attitude of the subject. This power is the

[1] See the preceding paper in this series, page 26, January WILSON'S PHOTOGRAPHIC MAGAZINE, as introductory to what follows.

power of selection—the first element in composition. From this base, with appropriate illumination and judicious choice of the shape of the picture (free to leave out or include what *he* needs or does not desire) he can make a pleasing and characteristic portrait.

For the majority of subjects, however, and for more than fifty per cent. of the sittings of the average studio, there must be posing, and the photographer must know either how to pose or how to see and *seize* a pose when the sitter gives it without suggestion or manipulation.

Properly understood, the pose in portraiture comprises the arrangement of the figure to fit a space. We know that the shapes of all bodies acquire greater significance when they are bounded, or enclosed within lines, and this significance changes

CAPTAIN SIGSBEE.

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according to the shape or proportions of the form made by the bounding lines, and also according to the space between the outlines of the object and the lines inclosing it. For this reason alone, when we attempt to represent a figure within a space bound by definite shape or proportion, composition or arrangement of some sort is necessary if the result is to be pleasing to the eye.

Here you have, as plain as I can give it in a few words, the reason why it is necessary to pose at all, or to know a pleasing, unconscious pose when the sitter gives it to us. If you take the preceding paragraph, and think it well over, you have learnt the first letter of the alphabet of the pose. When you have grasped its full meaning, take the first cabinet portrait at hand, and, with a white or blue or red

A DANCING GIRL.
By H. H. Pierce, Providence, R. I.

pencil, mark the outlines of the shape of the print. Then with the same pencil outline plainly the contour of the figure on the card, and next outline the prominent internal lines of the figure formed by the masses of light and dark, or by the lines of the draperies, arms, legs, etc. This being done, you have in those white or red or blue lines a skeleton of your composition—your pose of that subject. Recall the *facts* that the pose is intended to please the eye, to present or help to present the most pleasing characteristics of your subject, to emphasize what is desirable in the subject, and to conceal or subordinate what is unnecessary or undesirable. Now look at the outlined portrait again, and judge of its success or failure! Never mind the lighting, however exquisite it may be, or the character expressed in the face. We are talking about the pose, and only about the significance of the lines in the pose. If *they* please you, pat yourself on the back, and then outline a dozen similar portraits of different people to see whether the first success *was* a success or a fluke. The mastery of lines is an all-important element in all composition, but especially in the composition of the figure within a space of given shape and size. Read the fifth paragraph again, and you will find something new in it.

If one man (or woman) will write me that this matter of *lines* is worth further discussion, I will tackle the subject again next month.

LARGE HEADS DIRECT.

It is well known that, other things being equal, a direct photograph of a face is preferable to an enlargement. With our studio lenses we are inclined to get slight distortion of feature, which passes unnoticed in a small photograph, but which becomes prominent in an enlargement. Much attention is now being directed to the use of long focus lenses for portraiture, and many people believe that the best work of the future will be done with the camera seven or eight yards away from the sitter. Speaking on this subject, a writer in *Photographic Scraps* gives pointers which should be helpful, especially to the man who occasionally tackles "at home" work.

A studio is not at all indispensable; very excellent work can be done in a fairly lighted sitting-room, the chief difficulty being to obtain the use of a room sufficiently long to permit of the use of long-focus lenses, which I hold to be of the greatest necessity to attain to success. I have produced some very satisfactory results in an ordinary room which has three windows, and is much longer than broad. Placing the model in the best-lit corner, I stand the camera in that corner near the windows which gives me the longest diagonal of the room, some six to seven yards apart, and arranging matters so as not to obstruct the door I can then leave the camera safe in its corner whilst I pose the model. The room described is a drawing room; by hoisting the blinds up to the top and just drawing the lace curtains over the three windows I can get a very equal lighting, when the sun is not on that side of the house. The distance I have named of some six or seven yards between camera and model enables me to use very long-focus lenses, up to eighteen inches, which will give a good-sized head at that distance, and allows of going nearer to obtain very large heads. The use of long-focus lenses becomes absolutely necessary if we seek to obtain uniformity of definition together with absence of distortion. At a given distance, and with a given lens, at only a few feet from the model, it will be found difficult and sometimes impossible to obtain anything approaching equality in definition, and the effects of exaggeration of prominent parts will be fatal to success. When attempting to take a large head in a cramped space with a short-focus lens, as fast as we can get one feature in good focus another goes out of focus, and no compromise is possible except to produce a fuzzy negative which is sharp nowhere.

Again, long-focus lenses, at several yards distance from the model, will permit the use of larger apertures, in relation to focal lengths, than are possible with short-focus lenses, which must be stopped to such a degree that the exposure is seriously prolonged; in other words, the short-focus lens at close quarters will not work with a large aperture and give good definition.

If for no other reason short-focus lenses

must be condemned for this purpose because of the inevitable distortion or exaggeration, of which a few trials will convince. The slightest movement of the head, or the least alteration in the angle (relative to the axis of the lens), throws everything into confusion. I have noticed that the act of breathing throws parts of the head into and out of focus at each respiration.

Before commencing to take large heads direct several things have to be arranged. Backgrounds will be required, and a number should be made of different tones or colors, to suit varying complexions or types of features, and to obtain any desired effect as regards principal lighting and relief. Sheets of strawboard, of large size, and each with a hole punched in corners to hang up on nails behind the head, will act satisfactorily. They may be coated with distemper of any shade or color from black to white, and probably half a dozen such backgrounds will meet all requirements.

Study the important matter of the principal lighting. Whilst a diffused and equal light will be the first essential, we must also have means of adding to or reducing the dominant light, so as to obtain light and shade, relief effect, and so on. In a studio furnished with a complete arrangement of blinds this becomes easy, but in a sitting-room many dodges have to be resorted to. If the room has two or three windows, dropping the blind in one may give the balance of light desirable, and enable one to direct the principal rays in such a manner as shall bring into prominence all the points of the features of the model. Models differ so greatly in the class of features that the keen observer of humanity will vary soon see that he cannot treat all types alike; he will need to study their points, their style, and their individuality, in order to do justice to the excellence of his model. I might almost go as far as to say that no one pose and lighting will be equally suitable for all classes.

You must expose fully for heads. If you want to obtain the greatest softness, with delicate gradation in the flesh, you must avoid having to push development. Long development or forcing will most certainly produce harshness, excessive density on all prominent parts of features, and too much contrast, and the hair will always be darker in the finished print than it ought to be. It is really best to over-expose and control development. The result may be flat unless you take care; but a flat negative will give the retoucher something to do, and high lights can always be introduced in retouching. By giving full exposures such blemishes as freckles are reduced in their assertiveness, but under-exposure will bring them out with unwonted strength. Full exposure and a developer weak in pyro are conditions favorable to success.

When posing the head, study the effect of raising or lowering the camera from a central horizontal line, which may be considered the nose. Some types are best suited by bringing the head vertical and making the axis of the lens in a line with the nose. Others, again, are best when the head is slightly inclined toward one side; and you have to find out which will be the best angle for the camera. There are certain formations of heads where it would be undesirable to give great force to high cheek bones, just as it is advisable to diminish the appearance of double or triple chins if the model is "inclined" to *embonpoint!*

Study the exact amount of profile necessary to secure the very best effect for the particular head under treatment, especially as regards the showing of any part whatever of the off side of the face. Some heads must be taken in profile only, as high cheek bones or fleshy cheeks mar the effect of an otherwise perfect profile. The deviation of an angle of a quarter of an inch will spoil the effect. I have seen this change happen between focussing and exposure, the model having moved slightly. The head-rest may be used under many circumstances, and in some cases is necessary, but as a rule the pose is more natural when it is absent.

The dimensions of the head on a given plate should always allow plenty of margin to trim the print to the most effective size. If the head is to be vignetted, plenty of room will be required. On a 10 by 12 plate, if the head is six inches long that will be ample, but regard must also be had to the fact that female profiles frequently come out as broad as long, by reason of the elaborate dressing of the back hair, and you must then be guided by the width rather than by the length of the head.

In all cases top light must be avoided.

In a room this difficulty is rarely encountered; in a studio it frequently is; and in the open air it always is, and therefore, in attempting heads in the open air, care must be taken to reduce the top light by a screen or roof. I must add that I succeed better in sitting-room than I ever did in the open air; the light does not vary so much, and is more under control.

The taking of large heads will be found a pleasant, interesting, and profitable line, and therefore suitable to amateurs and professionals alike, and the use of a long-focus lens will improve the results.

By George Rogers, Binghamton, N. Y.

LETTERS TO JACK—AND THINGS OLD AND NEW.

III.

My Dear Jack: Your last letter proposes some hard questions to me. But as you seem to take yourself pretty seriously, I will try and answer you seriously. What you say is true—*i. e.*, that you truly give me "variety." "Variety" is one of the fundamentals of true art. But it does not overcome me, for I believe what Dr. Vandyke says in *Little Rivers* is true, *i.e.*: "that a good deal of the pleasure of life lies in bringing things together which have no connection. That is the secret of humor." You must be a humorist, therefore, and get "a good deal of the pleasure of life." Now as to your questions: You say, "Your advice is acceptable and good, but did you ever find yourself able to please everybody?" Frankly, I never have. But in dealing with my sitters it has been my habit to *try* to please them, as I have told you, and also to withold a share of the pleasure for myself. It is fair to allow your patron to have *some* say in the matter, but not to allow yourself to be domineered over. Take suggestions kindly and gently, but—keep out the relatives, especially when the subject is "the greatest baby on earth." I like the suggestions of Mr. George Butler, a portrait painter, in the "Field of Art" in *Scribner's Magazine* for January, who says:

"The sitter should always be made an accomplice, if possible. Children and fools, it is true, should not see work unfinished, but with such exceptions a sitter should be consulted, and, as Couture used to say, especially if she be a woman. The taste of women as to pose and accessories is more correct, generally, than that of men, even when the latter have been trained as artists. And this is true especially as to the portraits of the women themselves, for they almost always know what suits them in dress and surroundings if they have given thought to the matter, and few among them have not. Another matter of serious consideration is the choice to be made among the varied expressions which chase each other over the face like the shade and sunshine of an April day. The attempt to mark the changes would entail endless labor, so one has to be decided on. But it may be an infrequent visitor, and in such case it must be either provoked or waited for. A wise choice is that of habitual expression when it is agreeable, and the stable placidity of age usually lends itself to such an attempt more than the restless, fugitive character of youth. A child, sometimes a young woman, may be placed before a mirror, or a clever friend may be employed to fix the features in the desired mould."

These are some good thoughts which you can twist about to serve you. We all know how hard it is to secure the *expression* we think we ought to have. Address the subject as you will—with "Now! all is ready"; "Rest the lower lip, please"; "Think of the wild animals you have known"; "Look pleasant now," etc., etc., yet you are so often responded to by a preoccupied look which knocks all the enthusiasm out of you. On this score Mr. Butler further says:

"It is, of course, a part of the necessary training of the artist to overcome the obstacles inherent to his work—canvas, colors, brushes and light; but there are others not as inevitable, but often serious enough, in the character and attitude of his model. One obstacle peculiarly harassing is the manner of the '*distrait*' sitter, whose thoughts carry him or her far away from the studio or into the inner recesses of the soul; another, the self-consciousness of the being who simpers or frowns. In the latter case, the 'look pleasant' of the photographer is hardly permissible. The only remedy for such annoyances is the faculty of being interesting. A portrait painter should be entertaining himself, or have the skill to make others so. A sitter should be made oblivious of the task, but not hypnotized into silence."

It is not easy work, I know, but you must learn to spell *p-e-r s-i-s-t*, and keep on patiently until you can snap what you require. I often think of what was said by old Samuel Rowland, editor and publisher of the first magazine (not photographic, happy Samuel!), as follows:

"Who seeks to please all men each way,
And not himself offend,
He may begin his work to-day,
But God knows when he'll end."

"What do 'I' mean by detail?" you ask: A great many things and a great deal I might answer. The *Century Dictionary* definition of "detail" is: "An individual part of anything," while in photography "detail" and "definition" are somewhat synonomous terms. When we look at an imperfect negative, and say, "A little further development, or a little reinforcing, would bring out the *details* and much improve this picture," we mean that the "individual parts" of the picture could be made to show more distinctly by more careful development, or it might be the same in the case of printing a picture. You get the idea, I am sure. You will understand, though, that a picture should not be all "detail," lest it be "spotty." A proper massing of the lights and shades is always agreeable, and right and proper. It also helps the definition greatly. That is what I had in mind when I cautioned you against "cast-iron sharpness" in my article on "How to Enjoy Pictures" in *Mosaics*, 1900, page 154.

Mr. H. P. Robinson, in his *Pictorial Effect*, gives some admirable pointers on this large subject. Now, so much for portraiture. When you come to considering a view, the meaning is a little different, although the definition of the word is there more in accord with that of the *Century Dictionary*.

There in the distance, see, are the Pyramids, the driveway leading to them, the lofty rows of acacia trees and the great wide fields on either side, and camels and their drivers awaiting us, etc., etc., all parts of the "details" of the "General View."

If we desire a view of the *details* of *A View of the Road to the Pyramids* we must turn the camera only a little and focus nearer, when we will probably secure the view which follows, and which answers to the title we have given it. Here is a view which will rival anything else in the world: There are Bedouin Arabs, camels, donkeys, drivers, water-carriers, beggars, dogs, horses and chaises, people of all nationalities, and—the deuce to pay if you don't understand Arabic. As I stood with my camera there one day upon the rail of the bridge, an Egyptian policeman from below pulled my leg as a signal to "come down out of that." I promptly reached him down a silver piastre or two (5 or 10 cents), thus pulled *his* leg, and he went away. That was a "detail" not shown in the view, but it worked, and I secured all

GENERAL VIEW OF THE ROAD TO THE PYRAMIDS.

THE ROAD TO THE PYRAMIDS—DETAIL.

the "shots" I wanted. It was more exciting to me than "Buffalo Bill's Wild West Show," and it was more picturesque. It was the Wild East Show of Dromedary-Ali, the famous fakir of Cairo. When all the travellers were supplied with drivers, guides, etc., etc., the crowd broke up and went on Pyramidward, thus completing the details of the scene and illustrating the lines of the poet who wrote :

'Them that's rich they rides in chaises,
But them that's poor, by gracious, they must walk"—

or go on donkey or camel-hump. Further details next month. Until then, dear Jack, truly yours,

EDWARD L. WILSON.

"OUTDOOR" PHOTOGRAPHY.

THIS month we again give two pictures which are out of the usual run of straight professional work, though from the camera of one who is, we believe, a professional worker. They are the work of M. S. Lovell, of Oswego, N. Y., by whom they were sent to Mr. Marshall for criticism. With a slight alteration in the trimming of the prints we reproduce them here as being distinct attempts at photography with a purpose. The little scene of the marsh, with its reedy foreground and the slope of the hill beyond, is interesting as being a subject which most people would have passed by. The slope beyond is a very pleasing feature in the original, but its quality has very largely vanished in the reproduction. It is essentially one of those pictures which makes one wonder whether it is quite satisfactory within its limits. We would wish to be on the spot and see whether a picture could not be made of the scene. It is such a straightforward example of what we so often see in architectural work, where a building is taken "full on," and where we generally decide that a sidelong view would be better. In this picture there is a stretch of swamp, scarcely recognizable, except by the green evenness of its leaves, and we wonder whether a view more down the length of the swamp, giving it more prominence, would not have made not only a different, but a more satisfactory picture.

The study of the water has been by the printing transformed into a storm subject, and this is almost too much accentuated by the darkness in the right hand of the

By M. S. Lovell.

THE MARSH.

picture, possibly caused by the lack of covering power of the lens. This darkness has been reduced by a judicious trimming of the print along its right and upper margins. The surf dashing over the breakwater is good, and the old hulk in the foreground suggests how easily a picture may be swamped by a title. Take the picture as it is, we have a satisfactory picture. Were it called "abandoned" or "storm-

By M. S. Lovell.

AFTER THE STORM.

tossed," or any similar title which it is not fitted for it, the result would be unsatisfactory.

This picture suggests a question of truthfulness in photography. Exhibit it in any of the cities on the Atlantic coast, or in a British city, and a careful critic would wonder that such a hulk could remain, secure from the waves, close below the seawall that just runs diagonally across a lower corner of the picture. The suggestion to us is that the scene is on one of the great lakes, presumably Ontario.

In this brief comment we have refrained from any systematic criticism of these prints, wishing rather to indicate by a few fragmentary suggestions, how a picture might be looked into and analysed. It is not by glancing at, but by dissecting and studying, that we gain an insight into the work of others, and it is only by gaining this insight that we improve our work.

A NEW BOSTON STUDIO.

THOSE who remember the clever portraits by Mr. Will Armstrong (then of Troy, N. Y.), published in the 1898 volume of our Magazine, will be interested to learn that this skilful operator has acquired an interest in the new Conly Studio, of Boston, and will hereafter assist Mrs. Conly in its management.

The new studio is well located, opposite the Public Gardens, on Boylston Street—locally known as the Rialto of Boston—and has every convenience for high class trade. The opportunity is one well worthy of Mr. Armstrong's ability, and we are confident that his beautiful work will meet with cordial appreciation from the cultured citizens of the "hub."

The accompanying engraving is from one of Mr. Armstrong's pictures which secured an award at the last New England convention. Mr. Armstrong is very partial to the famous Voigtlander euryscope for portrait work, and his prize pictures were made with the euryscope portrait lens, concerning which the importers, Messrs. Benjamin French & Co., make an interesting announcement on another page.

By Conly, Boston.

OUR PICTURES.

OUR pictures this month are fully up to the high standard we endeavor to maintain in our illustrations, in variety of subject and treatment, as well as in interest and instruction. We honestly confess our pride in them and in their makers, despite the much-lauded critics who proclaim, in season and out of season, that the amateur is photography's sole hope and inspiration.

The charming portrait of a child, which Messrs. Boyé & Habernicht, of San Francisco, have supplied for our frontispiece, is a worthy example of the sort of portraiture which appeals most forcibly to the educated and cultured patron, combining as it does an admirable likeness with pictorial and photographic quality. Our print is on *Special Rough Velox* paper, and affords further proof of the fine qualities possessed by Velox, of which our readers are well informed. In our opinion this print is hardly distinguishable from the original

platinotype which accompanied the negative. Other examples of the work of Messrs. Boyé & Habernicht appear elsewhere, and a fourth on this page, in which, however, our engravers have failed to preserve the delicate values of the original platinotype vignette.

The two outdoor scenes were sent us by Mr. M. S. Lovell, of Oswego, N. Y., simply to show us the first fruits of a holiday with the camera. They have considerable pictorial value, and we engrave them for the encouragement of other professionals who may be tempted to relinquish the skylight now and again to become better acquainted with nature.

The combination group sent by Messrs. Van Loo & Trost, of Toledo, O., offers a profitable suggestion which should not be overlooked. The combination portrait group, made up from many different sittings, is one which may be made to bring considerable business; and, apart from the cabinet business it brings, the sale of the group pictures, etc., it makes a very attractive display picture. Messrs. Van Loo & Trost explain that their picture is by no means perfect, inasmuch as many of the separate cabinet portraits were made before the idea of the group was conceived; hence the figures were not always in due proportion to their place in the picture.

The idea intended in the group is that the young people are about to open the grand march. The court jester (Mr. Carl Trost) steps down to lead as the orchestra begins with the first bars of the march, and the others are about to follow him down the hall.

The portraits by Mr. Hy. H. Pierce and Mr. J. Rogers speak for themselves as interesting examples of the handling of different classes of subjects, and will well repay the careful study of our readers.

By Boye & Habernicht.

THE STRAUSS STUDIO DESTROYED BY FIRE.

PHOTOGRAPHERS everywhere will hear with keen regret that the beautiful Strauss studio, St. Louis, was completely destroyed by fire during the night of January 31. The interior of the building was utterly wrecked, only the bare walls remaining. If the stock of negatives kept in a supposedly fire-proof vault in the basement is found to be ruined, the total loss, according to Mr. Strauss, will approach $250,000. The loss is said to be covered by insurance.

The studio was erected in 1896, and, after being artistically furnished, was dedicated in March, 1897. Its total cost at that time was estimated at $70,000. Since then about $10,000 had been spent in new furnishings and decorations, which were completed only a few weeks ago. A full description of the gallery and its many interesting features, illustrated, was given in our issue of August, 1897. Curiously enough, the studio is again fully described, with many illustrations, in the last num-

ber of Monsieur C. Klary's *Le Photogramme* received from Paris. Mr. Strauss estimates the damage to the building at $60,000, to the stock $20,000, and to the decorations $20,000. In addition to its unequalled collection of portraits of eminent St. Louisans, the gallery contained many valuable paintings by well-known artists. All, unfortunately, were lost.

We are sure that the fraternity will join us in this expression of cordial sympathy with Mr. J. C. Strauss in his misfortune. The studio will, we believe, be rebuilt at once. The fire is supposed to have originated in the crossing of electric wires.

The following extracts from local newspapers will be interesting:

"When the fire was first discovered the flames were in the reception-room on the first floor. The watchman turned in an alarm at 10.07 o'clock. By the time he reached the building again the fire had mounted to the second story. Street-cars of the Suburban line were passing just as the flames burst from the second-story windows, and by the time the firemen arrived on the scene the heat from the burning building was intense.

"One glance was enough to show that the building was doomed, and six minutes after the first alarm was turned in a second alarm summoned additional engines to the scene. Street-car traffic on the Suburban was immediately abandoned, and the passengers formed the nucleus for an immense crowd. The flames soon burst through the mansard roof, faced on the Franklin Avenue side of the building by glass, and brightened the heavens with their glare, attracting more spectators. A half-dozen streams of water were turned into the building at this point, and as soon as possible ladders were erected. As soon as the flames had been driven back from the edge of the wall, firemen mounted and on the narrow and heated ledge fought the fire from that vantage-point.

"Other lines of hose had been brought into the rear of the building and carried to the roofs of adjacent buildings on either side. On the roof of the Vista Block, separated from the studio by a narrow passage-way, were four streams of water. In the residence directly adjoining the studio on the east a hasty exit was made when it was seen that the burning building was doomed. A stream of water was carried into the residence and out upon the roof.

"In a few minutes the water gained the mastery over the flames in the studio, and the red glare died out. Suddenly there came an explosion, supposedly in the operating-room or the store-room, where the chemicals used in the business were stored. This gave added impetus to the flames, and they burst forth with renewed fury. They mounted into the tower on the southeast corner of the building, which so far had escaped, and as they poured out of the odd little windows created a picture not unlike those simulated upon the stage.

"Inside the building the fire was still burning intensely at midnight, though it was plain that, aside from the damaged residence to the east, they would be confined to the studio building. Owing to the peculiar construction of the building, the walls were unusually heavy and withstood the fury of the flames.

"The employes of the gallery were quickly upon the scene, being summoned by special messengers from their homes. None was willing to make a statement of the possible loss until the arrival of Mr. Strauss, who at once held a conference with his private secretary, Mr. Goodlove, his attorney, N. M. Sale, and two friends. At the end of the conference he announced that arrangements had been completed by which he would be ready to make sittings at a temporary studio within a day or two.

"It had been said of the Strauss studio that it was the 'most chastely rich in appointments and decorations that this country has seen.' The interior was furnished with all the opulence of an oriental drawing-room. There was in the studio a wealth of art in all its kindred branches, delicate statuary, furniture wrought by a master's hand from the designs of an artist, and paintings from the brushes of some of the best artists in the world.

"Just off the operating-room there was a little circular den wherein Mr. Strauss entertained his friends. The walls of this 'den' were a succession of panel paintings from such artists as Paul Haney, Louis Mullgardt, W. H. Howe, Robert Onderdonk, I. Goodlove, F. L. Stoddard, and Oscar L. Berninghaus. A soft glow was thrown over the whole by numerous stained glass windows In the galleries

were photographs of every prominent man in St. Louis. The whole interior was richly upholstered, and as a photographic studio was one of the most complete in the United States. The building was acknowledged to be the largest in the country devoted entirely to the photographic business. It was especially designed for the owner by Louis Mullgardt, the architect, and was of the style of the French Renaissance. On the balcony floor was a notable collection of autographic portraits. In the tower room was a collection of miniatures and portraits in colors.

"A short flight of stairs from the balcony floor led to the waiting-room and dressing-rooms. On this floor was the operating-room, 30 x 40 feet, and 30 feet high, recently decorated with tapestry and furnished with choice bits of furniture.

"The third floor was used for a printing-room and fixing-room. The basement contained the heavy work-rooms, the heating plant, and the fire-proof vault, in which are the negatives taken during the twenty years of Mr. Strauss' work in St. Louis. These number between 150,000 and 200,000."

Mr. Strauss writes that he is personally giving sittings at the old Canova studio, 3518 Olive Street. For the first best photograph of the studio ruins, made by an amateur, he offers fifty dollars.

CARAMEL FOR PLATE BACKING.

We often find that home-made caramel is very unsatisfactory to work with, and unfortunately the making of it is somewhat uncertain. Caramel is undoubtedly the best backing for plates; its color is non-actinic, and its refractive index is about the same as glass. Caramel is usually composed of three different substances, known under very similar names, but different in their usefulness. When the sugar is boiled it changes into caramelane, caramelene and caramelin. The differences may be stated to be due to the varying quantities of water in the substances. Sugar heated to 370° F. forms caramelane, which has not a good color and *won't dry hard.* On being raised to 420° F., caramelene is formed, and this is very highly colored and won't get sticky in damp weather. It will thus be seen that the heat to which the sugar is raised is a vital factor in determining its value for backing plates. In the *British Journal of Photography*, A. Haddon gives careful directions for the preparation of caramelene.

Place in a capacious stewpan, say, one pound of loaf or granulated sugar (raw sugar will not do), and rest the whole on a clear fire, or, better, on a gas-stove. As soon as the sugar begins to melt, stir it with an iron spoon, and, till the cooking is complete, the stirring must be continued, or the sugar may be burnt. Until the whole of the sugar is melted there will be no great rise in temperature, and the volume will be small, but soon after complete fusion the temperature will begin to rise, and abundance of bubbles will be formed, so as to fill almost completely the stewpan, unless it be a very capacious one indeed. Judging roughly, I should say that the volume increases to five or six times that of the fused sugar. After a few minutes the frothing will gradually subside, and the effect of the continued heat will simply cause the mass to boil, but without any very considerable increase in volume. At this stage the caramel is very fluid, of a light red color by transmitted light, and the bubbles rise easily to the surface. The temperature is now about 420° F., and this temperature should be maintained for about fifteen minutes; at the end of that time the fused mass begins to thicken, and the cooking should not be continued more than four or five minutes after this stage, as, if it is, there is danger of the whole mass being converted into the insoluble variety, and time and material will be wasted. It would be best, perhaps, for a beginner to operate on a smaller quantity of sugar as a first trial, so as to study the different changes, and, when a satisfactory sample can be produced, then to repeat the cooking on a larger scale.

As soon as the caramel has passed through the various stages, pour out the contents of the stewpan on a piece of cold metal or on a slab of slate or marble. If sheet-metal is used, the caramel will be found, as it cools, to detach itself in pieces from the support. If the operation of

cooking has been properly carried out, when cold it will be brittle and free from tackiness.

The caramel should now be broken into small pieces and placed in a wide-mouthed bottle, and sufficient water added to cover about one-third the height of the caramel. If the bottle be set aside for a few days, the solid will have dissolved, and we shall have a thick, sticky mass of caramel dissolved in water. This solution contains both caramelane and caramelin. The next operation is to separate the one from the other. Caramelane is soluble in alcohol of 84 per cent.; if, therefore, the sticky solution be poured into strong alcohol, the caramelane will remain in solution, and the caramelin will be precipitated. Ordinary wood alcohol will do quite well, and eight to ten times the volume of the syrup should be used in order to effect the separation. If the alcohol is of the proper strength, the alcoholic solution ought not to be very deeply colored, and a large, soft lump of caramelene should be found at the bottom of the precipitating vessel at the end of about an hour. When the solution is first mixed with the alcohol, it becomes of a brownish color, due to the precipitation of the insoluble caramelene.

After draining off the superfluous liquor, water is added in sufficient quantity to form a tolerably fluid mixture. If this be used by itself to back plates, it will frequently be found on drying to flake off the glass. This defect can be avoided by adding from one-eighth to one-tenth volume of the original caramel solution. In this way a mixture is obtained which will both dry hard and remain firmly attached to the plate when dry.

In order to apply it to the plates, pour a small quantity into a saucer, and then allow a piece of wadding to become partly saturated with the solution, and pass it over the backs of the plates till they are evenly coated. Only a thin coating is required for ordinary work; but, if a difficult subject is to be photographed, then it is better to apply the caramel with a brush, so as to leave a thicker layer on the plate.

To cause the caramel to dry quickly on the backs of the plates, instead of dissolving the caramelene in plain water, dissolve it in spirit and water, in the proportion of one of the former to three of the latter. Caramel thus prepared will dry, when the thickness is not excessive, in about thirty minutes.

Some workers recommend the addition of burnt sienna or other insoluble body to the caramel; but this, I think, is a mistake. If plain caramel is used, the plate can be transferred direct to the developing solution, and without any danger of pinholes being formed, due to particles of insoluble matter adhering to the film, and so preventing the full action of the developer. The solution of the caramel in the developer has no detrimental action on the image.

The color of caramelene is very non-actinic, so that, if at any time I could not obtain glass or other material with which to filter white light for development, I should not hesitate to trust to the light which comes through paper, or linen coated with caramel.

LIGHTING: ITS IMPORTANCE IN PHOTOGRAPHY.

BY T. N. ARMSTRONG.

PERHAPS there is no more important factor in the obtaining of successful results by means of photography than the possession of a thorough knowledge of the most suitable form of lighting to employ in the particular class of subject being dealt with.

It does not matter what particular branch of photography is being pursued, *lighting* is of the utmost importance, and any negligence in regard to it is certain to be reflected in the quality of the work turned out.

In portraiture, for instance, anyone who has never experienced the difficulty can form no idea of the amount of labor and thought that is incurred in the fitting up of a studio before the best effects in lighting are obtainable, and if this be necessary for the production of not only portraiture where specially fitted-up studios are concerned, but what is of equal importance, lifelike results, how much more difficult is it to obtain anything like equal results in

what is termed "home portraiture," a branch of photography now largely practised by thousands of amateur workers, who derive a large amount of pleasure therefrom.

In studying any face it is intended to photograph, the first aim should be to ascertain what light best suits it, and it only requires but a little consideration by anyone desirous of practising portraiture to understand that the light most suitable for one face would not by any means be equally so for another.

Therefore it follows that the professional, working in a specially fitted up studio, has at command, by means of his top and side lights, each of which is furnished with a well-devised system of screening, a power which enables him to execute portraiture in a manner superior to that which anyone working without these adjuncts and facilities need never expect to attain; and if we examine still further into the question of what is required in lighting a face to its best advantage, we will find that not only must consideration be bestowed upon the amount of direct and diffused light employed, but some thought must be given to the proper direction from which both the direct main and also the diffused lights are permitted to fall on the face and figure of the sitter.

Portrait painters, as a rule, work with a side light falling at an angle of 45°, because this is found to suit the majority of faces; and this has been followed in a great measure by professionals in the construction of their studios.

In executing portraiture outside a specially fitted-up studio, say, in such a situation as a large-sized room having an ordinary window, much may be done to assist and improve the lighting of a face by means of a few well-arranged screens and reflectors.

When work of this kind is attempted in an ordinary room without any such provision being made, it generally ends in failure, by reason of the lighting showing too powerful contrasts, and this is painfully evident by the shadow side of the face coming out almost black, whilst the side next the light is far too hard—results brought about by a want of diffused light, to obviate which not only must there be provision made to throw reflected light upon the shadow side of the face, but, what is of much greater importance, the light that is permitted to reach the side of the face next the window must be filtered or diffused by means of thin transparent muslin screens.

In carrying out an arrangement of this kind, it does not necessarily follow that the entire surface of the window should have blinds fitted to it, for this would tend to cut off an amount of useful light that can ill be spared when working under such cramped conditions of lighting. All that is required is to provide some simple screen of muslin of just sufficient dimensions as will be capable of diffusing all the main light that otherwise would reach the face. A screen of muslin, made by stretching this material on a light frame three feet square, so that the frame can be interposed between the face and the window at a point just outside the range of the lens, will be found to work admirably.

Anyone desirous of attempting portraiture in ordinary sitting-rooms would do well to try the following experiments, from which he will be able at once to judge of the immense importance that is attached to the proper lighting of the face. At a distance of, say, four feet from any ordinary window, let a sitter be placed on as low a chair as possible, and let the body be posed so as to have the chest and front part of the figure almost facing the window, but not quite under the full light of same; then, without moving the chest or figure, let the face be turned away from the window until a somewhat side light only falls upon it. If the operator now steps back and views the effect of such a disposition of lighting, he will at once see that it is quite unsuitable, for the side next the window is much too brightly lighted, while the off-side of the face is enveloped in deep shadow, in which the finer details of the face are entirely buried. At this stage let the operator bring to his aid the service of some kind friend, and, without altering the position of the sitter or moving from the same spot from where he viewed the effect, let his friend or assistant hold up slightly above the head of the sitter, at a point between the same and the window, the muslin screen described previously, and the very moment it is placed in position he will be surprised at the change that comes over the sitter's face, for not only will the side next the window,

that was previously far too bright, appear to be beautifully softened down, but the shadow side will appear to immediately lighten up, and the dense shadows previously apparent will disappear, and detail spring into view that was entirely unseen before the screen was placed in position. And, if at this stage the services of some simple reflector be brought into requisition, so that a somewhat front side light be thrown upon the front as well as the shadow side of the face, a marked improvement will have been effected, and, under such conditions, heads and busts may be well photographed in any well-lighted sitting-room; but it must not be imagined that full effect is capable of being given to every class of face in such situations, for this is really impossible with some kind of faces, where more or less top light is required to yield lifelike results, and which can only be attained in properly fitted up studios.

In another branch of photography, viz., copying, lighting also plays a most important part. Take, for instance, the photographing of oil paintings. Here, again, we see the need of having command over the light that is permitted to reach the object, for hardly any two pictures will be found that require exactly the same treatment, as, apart from the ever-varying range of colors met with, there are also great differences in the skies, some paintings have wide expanses of such and others none at all, and these large portions of what may be termed high lights in a painting require to be specially treated in the way of lighting, otherwise these parts are hopelessly over-exposed before the details in the darker portions are sufficiently brought out, and it is only by unwearied practice that anyone becomes expert in the copying of oil paintings. That very much of the success in this work lies in being able to have complete control over the light at command the writer well knows, for his experience, gained by photographing hundreds of oil paintings during recent years, has clearly shown that there is a best form of lighting for this particular class of work, and this will probably be found by those anxious to undertake the work in the direction of a top light alone; but it must also be a very high light, and the studio must also have plenty of length, so situated that sunlight never reaches it. With such a high top light there is no difficulty experienced with reflections from the surface of the paintings, provided they are placed upon the easel in a vertical position and suitable material is spread over the floor. This is the natural outcome of a simple law in optics, and without a suitable light there will be no end of trouble in equally lighting the surface of any picture, and, in the case of oil paintings, any broad expanse of reflection is quite fatal.

The obtaining in monochrome of correct color value when photographing colored objects is quite a different matter now to what it was fifteen years ago. At that time the reproduction in monochrome of colored objects was considered wellnigh an impossibility, and what was attempted in this direction before the introduction of chromatic plates was confined chiefly to the manipulation of the negative and the special treatment of same in printing.

These negatives were generally produced in a thin, fully exposed form, and were largely worked up by hand, such as the strengthening of high lights and half-tones, and also giving depth to the shadows, thereby lowering the tone of the colors which came out too prominently and raising others to their proper proportions. Although in the copying of oil paintings more or less of this kind of modelling is still practised, the wonderful improvements effected in the orthochromatizing of plates has tended to reduce the labor previously necessary to a very great extent, and now, with a well-appointed system of top-lighting and facilities for shielding certain portions of the object, results are obtained far in advance of those produced years ago.

In connection with the photographing of numerous light-colored objects, such, for instance, as statuary, the direction of the main light, as well as the quality of the light employed, plays a most important part if pleasing results in light and shade are to be secured. It is quite surprising the difference in appearance such objects will present under varying dispositions of light.

With heavy objects, such as statuary, much difficulty is sometimes experienced when they have to be photographed in unsuitable positions. As a rule, however, a well-diffused top light, backed up with,

when necessary, an increase of reflected light at such points as bring into strong relief such parts as require to be portrayed as high lights, will be found to yield excellent results.

Heavy statuary, as a rule, especially in all well-appointed public galleries, is never placed in situation without a considerable amount of thought being bestowed upon the manner in which it is to be lighted; but it will be found very often the ever-varying direction of the sunlight and daylight always yields a particular hour of the day when it is seen to the best advantage, and this should be closely studied when photographing the same.

In commercial work there are innumerable instances where special provision has to be made for certain objects, among which may be mentioned such articles as delicately formed fabrics, in which fine traceries are present, and in which also the design is represented by the form of the fabric, an instance of which we see in lace articles and fine embroideries. When dealing with many of these special provision must be made when stretching them, so that the design of the lace is not interfered with by excessive stretching, and this is best accomplished by using a special stretching frame, which only applies equal tension in all directions. Lace curtains, for instance, have frequently to be photographed for process work. Here, again, not only must special attention be given to the lighting, but they must be treated in such a manner as to bring out the pattern and design in bold relief. This is accomplished by photographing them when they are suitably distended on stretchers, and placed under a very high top light only, with an absolutely black background, and this must on no account be brought close up to the fabric, as many suppose, and sometimes actually placed in contact with the curtains.

For a background in work of this description there is nothing to equal black velvet, placed at least twelve to fifteen inches behind the fabric, and when such arrangements are carried out, and a slow transparency plate used with a very full exposure under a high top light, beautiful reproductions of the finest design and traceries are possible of accomplishment.

In work of this description the faintest inequality of lighting will be apparent when the negatives reach the printing stage, so that it frequently happens that some experience and previous test of which is the best portion of the studio to employ at a given hour of the day is required, so as to produce nice, even results that permit of good process blocks being produced.—*The British Journal of Photography.*

A CIRCULATING INTERSTATE EXHIBIT.

We have received the following announcement for publication from Alva C. Townsend, the Secretary of the Nebraska Photographers' Association, Lincoln, Neb. The scheme has our hearty approval, and we hope that it will be successfully carried through.—Ed. W. P. M.

The secretaries of the various State associations have been in correspondence for some time with a view to uniting on a scheme for interstate work that will not only create interest, but give each State association an opportunity of seeing and knowing just what is being accomplished by others in photography.

The plan is to inaugurate a *Circular Interstate Exhibit* which will pass from one State convention to another. The association holding the first meeting this year will choose, by popular vote or special committee, the best portrait in display, and pass it to the next association holding its meeting, where it will be exhibited.

This association, in turn, will make a choice from their displays, and the two will then pass to the next convention, etc., etc., each association contributing one portrait, which will form a part of the whole, and make a complete circuit of all the conventions, when it will be replaced by another chosen at the next meeting, and the former one withdrawn, thus making an enduring exhibit of rare beauty and quality.

After the exhibit is complete, which will take a year, the National Association can be included on the list, and the exhibit

displayed, and an award made to the *State* whose portrait receives highest honor by the popular vote or special committee appointed for that purpose.

Nearly all the State associations are now represented, and a "Circular Interstate Exhibit" is assured. Any association desiring to be included on the list can do so by writing Alva C. Townsend, Lincoln, Nebraska, stating the date of their next meeting.

A way bill will be sent to each secretary, and will also accompany the exhibit, as soon as such can be obtained.

THE NEBRASKA CONVENTION.

THE Secretary of the Photographers' Association of Nebraska sends to our desk an interesting letter concerning the State Convention, which all Western photographers should see. Copies may be had on application to Mr. Alva C. Townsend, Lincoln, Neb.

The convention is announced to be held at Lincoln, May 22, 23, 24 and 25, and a special invitation is extended to Colorado photographers. A good exhibition of professional work is already assured. Professor Griffith will attend all the sessions of the convention and give addresses on the art side of photography, and special rates are to be obtained for transportation. The prize list is as follows. Exhibits must reach Mr. Townsend, prepaid, by May 18; and special attention is called to rule 4, that "the name of the exhibitor must not appear on his exhibit."

Grand Portrait Class. Open to the world. One magnificent gold-lined silver cup. Entrance fee $2.00. Must be ten exhibitors, otherwise no awards and money returned. For six 11x14 or larger portraits framed without glass.

Standard Class. Twelve cabinets. Must be in one frame without glass. First prize, one silver cup; second prize, one silver medal.

Class A. Eighteen portraits, any size. Must be made by exhibitor. First prize, one gold medal; second prize, one silver medal.

Class B. Eighteen pieces, cabinet or smaller. Subject, children under five years of age. First prize, one gold medal; second prize, one silver medal; third prize, one bronze medal.

Class C. Six 5x7 or smaller: unretouched negatives. Must be made by exhibitor. First prize, one silver medal; second prize, one bronze medal. Suitable racks will be furnished.

Class D. One gold medal for finest portrait. Award to be made by popular vote of the convention, and to be placed in circular interstate exhibit.

Special Class. Complimentary exhibit. All exhibits in this class will be awarded honorary ribbons.

Special awards will be made for the three best papers on photography, any subject.

Colorado photographers who join and make exhibits will receive honorary medals.

THE HOG SENSE OF RETOUCHING.

BY SILVER BATH.

YEARS ago, when we old-timers were the young generation, and collodion and the nitrate bath the accompaniments of every studio, we used to think, at times, that our portraits were a trifle hard. In those days we did not see a new developer advertised every month, and could not change to new plates or new paper as easily as we can today. We had the old silver image on albumen paper, and a very beautiful image it was—and permanent until "double" albumenized paper and other innovations started us all experimenting and striving after novel results. But to get back to my subject. It was one day announced that an Austrian photographer had invented a way of changing the film of a negative in such a way as to give more artistic results; we talked of art even in those days. We waited anxiously for particulars, and soon learned that Herr Rabending, of Vienna, worked on the films of negatives with

powder and a very fine stump. His retouching powder was made by adding pyro and ferrous sulphate to a solution of silver nitrate. A precipitate was formed, which was dried and then ready for use. This method was not quite satisfactory in working, and Rabending soon discovered that in the lead-pencil he had a tool much safer in its results, and one which could be used much more delicately. Had we all followed Rabending's lead, there would be no need for those latter-day workers who fail to distinguish between the use and abuse of the retouch, and so entirely ignore retouching.

The discovery of retouching was a distinct advance in photography; but like too many good things, it became first a fashion, and then a craze, and a good portrait was one in which the skin was made to resemble wax or marble. Small blame to those who have swung round to the other extreme and have done away with retouching. Why do we retouch at all? There is no sharp distinction between spotting and retouching, and we all know that spotting is a necessary evil and will continue one until we become sufficiently cleanly and tidy to keep all dust from our studios and apparatus. From spotting such mechanical defects as pinholes, etc., it is an easy transition to softening a light or reducing a shadow. But the evils of retouching, as used at present, may be said to counterbalance its present usefulness. One of its greatest evils is the slovenly habit into which it has allowed photographers to drift. A photographer should so work his operating, posing, lighting, etc., as to obtain a negative which would be satisfactory, and he would do it, if the retoucher were not so fatally easy. A clever photographer should be able to do all the retouching required on most negatives by holding them up to the window in one hand, and using his pencil on them. I am not advocating the entire banishment of the retouching desk. There are cases—as in much freckled subjects—where pencil-work may be required and should be done, but on the general average run of work the less retouching the better.

It is said that the customer demands retouching; but this is scarcely a fair statement. The photographer has "educated" his customer into the idea that retouching is artistic; but give the delicate modelling, and exquisite skin texture which is obtained by careful lighting and good exposing, developing and printing, and it will be accepted by the customer in preference to the worked-up negative. Retouching is now most widely and recklessly practised on the cheapest class of work, and this in itself is enough to set "the fashion" against it. I do not consider that retouching is the especial practice of those fine workers who have been doing the best work for twenty years or longer. In moderation, and with brains, it is just as necessary to the youngest of us, for even he is not infallible. But retouching can be gotten rid of as a regular part of preparing a negative. Not by substituting muddy shadows and dirty whites, printed on rough paper, and mounted on a sheet of wrapping paper, but by careful lighting, judicious focussing, and a thorough understanding, before the exposure is made, of what the result will be on the negative. Remember that it is not necessary to eliminate character in order to get an appearance of youthfulness. Some of the most delicate, daintiest of portraits—portraits which would delight the heart of a miss or of a fond mamma—are entirely free from the retouching pencil. It can be done by discrimination in lighting.

METHODS OF ARTIFICIAL ILLUMINATION FOR ENLARGING PURPOSES.

BY C. WELBORNE PIPER.

It is essential that the method of lighting employed for the illumination of the negative shall be capable of producing a perfectly even effect over the whole image; and to insure this it is necessary to evenly distribute the light by means of an optical ystem, such as a condensing lens, or by the aid of diffusing screens or reflectors, or by the employment of a moving light.

The Condenser System of Illumination. This is the most efficient and convenient system, but it requires the most expensive form of apparatus. To produce the best possible results with a condenser, it is ab-

solutely necessary to employ a source of light of very small dimensions, such as is produced in the lime-light or electric arc. With a large source of light, as incandescent gas, oil lamp or acetylene, the optical system is upset, and it is difficult, if not impossible, to obtain even illumination without the extra aid of a diffusing screen of ground or opal glass, which addition negatives the more important advantages of the optical system of illumination. At the same time, the use of an enlarging lantern almost necessitates the employment of a condenser, as other methods of illumination (with perhaps one exception) cannot be readily employed in a closed, light-tight light chamber, such as is essential in a lantern, and, if lime-light or electricity is unavailable, the hybrid system of combining a condenser with a diffusing screen is a convenient expedient.

The particular objections to this procedure are that, with any considerable degree of enlargement, first, the system, being an imperfect compromise, it is not easy to secure perfectly even illumination; and, second, the use of diffused light always prevents the attainment of critical sharpness of definition. As, however, these defects are barely obvious with moderate ratios of enlargement, they may be ignored by the average amateur. At the same time, if we only work to a small scale, it is possible to employ effectively other methods of enlargement with which a closed light chamber is not essential, and we can then dispense with the costly condenser system of illumination.

The Use of an Optical Lantern. If an optical lantern is available, it may be conveniently utilized as a means of illumination, though it cannot be used as an enlarging lantern on account of the condenser being too small, the projecting lens being unsuitable, and the body of the lantern not being light-tight.

The lantern should be placed so as to throw a disk of light upon the negative. A slide should be put in the lantern, the front tube extended, and the image sharply focussed on as small a scale as possible on a white screen placed in the position of the negative. The removal of the screen and substitution of a piece of ground glass for the lantern side should leave the negative evenly illuminated.

Reflected Artificial Light. This system may be generally described as follows: Set up a vertical dead white reflecting screen, and place in front of it two equally powerful paraffin lamps or incandescent gas burners, so arranged as to produce perfectly even illumination of the white surface. The intensity of the illumination can be increased by placing reflectors behind the lamps. The negative is then placed between the lamps, parallel to the reflecting surface, and is screened at the sides so as to protect it from any direct light other than that received from the reflector.

Success depends upon carefully arranging the lights so as to obtain the most powerful and uniform effect upon the screen; and the required exposure will vary with the distance of the negative from the screen and the compactness of the whole arrangement. It is advisable to use semi-cylindrical reflectors behind each lamp, as these serve the double purpose of protecting the negative from direct light and of concentrating all the available light upon the large reflector. If the lamps and screens can be kept permanently set up, they will be available for use at a moment's notice; if this cannot be done, their positions should be recorded on a table-top or board or sheet of cardboard. Even if the lamps have to be specially purchased, the total cost of the installation will be considerably less than that of any efficient condenser system of illumination. By enclosing the whole in a light-tight box or chamber, inserting the negative in an aperture in the proper position in the front of the box, and placing an ordinary camera, reversed, in front of the aperture, an efficient, though somewhat clumsy, substitute for an optical lantern can be produced. Chimneys and ventilators must be arranged over the lamps, and the construction of the light-tight chamber is somewhat a troublesome operation.

The Use of Magnesium Ribbon. There are two practically applicable methods of obtaining even illumination with magnesium ribbon. One is to hang up a number of strips of ribbon of equal length, and at equal distances apart, behind the negative, and light each strip in turn; the second is to light a piece of ribbon, and move it about behind the negative, so as to evenly distribute the light. Ground glass should be interposed between light and negative

in both cases. The first method has certain disadvantages. It is extravagant as regards the quantity of ribbon required; it does not readily permit careful adjustment of the exposure; and it does not give any opportunity for screening weak portions of the image. With the second method exposure is regulated by the quantity of ribbon employed, and the unequal density in the negative is easily compensated by applying more light to the dense portions and less to the weaker ones. There is no difficulty whatever in securing even illumination. The movement of the lighted ribbon produces a band of illumination across the negative, and if we thus draw a series of parallel bands of light across the negative in one direction, and hatch them at right angles with another similar series, equal effect is produced over the whole. It should be noted that the bands of light should be drawn an inch or so beyond the margins of the negative on all sides.

The process may be looked upon as one of "shading" the negative with light, and while it is easy to "shade" it with an even "tint" all over, it is equally easy to modify the depth of the "tint" where required, by closer hatching, or additional cross-hatching, or by varying the spacing of the lines or distance between the light and negative. To produce a strong local effect, the ribbon must be held very close to the negative, and the ground-glass screen between light and negative may be removed during the local illumination of any very dense portion of the image, or doubled during the application of the light to a very weak part.

The great objection to the use of magnesium is the smoke produced, and the simplest way to get rid of it is to work in a good draught, with window and door both open, which is rather unpleasant at this time of the year.

The method of illuminating a negative by applying the light, as and where required, has many advantages, and if a convenient small hand-lamp projecting a narrow beam of intense light of a smokeless nature could be devised, I should adopt it in preference to any other form of illuminant with an enlarging camera.

Effect of Illuminant on Sharpness. This is a matter that is much misunderstood. Extreme sharpness can only be secured by the use of a perfectly arranged optical system of illumination with a condenser. The use of diffuse light is detrimental to sharpness, especially when diffusion is produced by moving the light. Sharp definition cannot be obtained with either of the described methods of using magnesium; but the softness produced is pleasing, rather than otherwise, with moderate ratios of enlargement from an originally sharp negative.

Screening the Image. This is so often necessary that provision must be made for it in any method of enlarging. It may be done between the lens and image, or between the light and negative. The former is the most convenient position; but it cannot be adopted with any form of enlarging camera, and hence, with such apparatus, the use of a condenser system or of reflected light is often inconvenient. With magnesium ribbon, movement of the light is a substitute for screening.—*Amateur Photographer.*

THE PROFESSIONAL AND THE AMATEUR.

To the Editor of Wilson's Photographic Magazine:

I have read much in the Magazine and elsewhere during the past year about the relationship of the professional to the amateur, and *vice versa*, and at the same time have read a good deal of wholesome advice from the pen of Mr. John A. Tennant to the professionals who have made complaint to him of amateurs hurting their business.

The recent receipt of a letter of inquiry from Secretary Garmany, of the Savannah Camera Club, anent "Professionalism" and the status of the Mobile Camera Club upon that question, impels me to inflict a few "views" upon your readers, many of whom I know are professionals.

From the complaints of some of the professionals which I have read during the past year I am at a loss to know what manner of amateurs they dwell among. I cannot see why there should be any con-

flict between the professional and the amateur—the former practising the art-science as a means of livelihood and the latter for pleasure alone. Speaking as Secretary of the Mobile Camera Club for the past three years, I can say that there exists the utmost cordiality in this city between the amateurs and the professionals, with, perhaps, a single exception. The club and its members have been greatly aided and helped over many obstacles by a professional of this city, and the amateurs worthy of the name have shown their appreciation of this assistance by giving all the work possible to this professional as well as throwing all the work possible his way. One of the amateurs interested himself in the professional's young son, and by his influence has placed him in a position requiring about two hours of his time daily, which pays the lad about three hundred dollars a year. I know personally that one of the members of the Mobile Club, who has no time to take prints to sell and does not care to sell them, turns over his negatives to this professional whenever there is any demand for any exposure he may have made, and lets the professional make what he can from such negatives. The professional returns the compliment by developing a plate now and then or making a print when the amateur is too busy to do it for himself. With this cordiality existing among us down here, I for one cannot understand why the professional should inveigh so against the amateur, unless, forsooth, he never comes in contact with any other brand than that which I have denominated "the guerilla amateur." There are a few of this species down here, but he is frowned down on so hard that he does not get much of a show. The "guerilla amateur" is one of the push-the-button variety, who knows practically nothing about photography and cares less, and whose sole aim is to pick up a few dimes wherever he can for the miserable excuses from his box; one who hangs around the gallery of the professional, if permitted to do so, and picks up all the information he can, and then goes outside and tries to take the professional's customers from him by offering to do the work cheaper than the professional.

An amateur whose pictures are worth having should charge for his prints and charge well. Let him set his standard high and make his price above the professionals rather than below them. A young amateur of this city who has been quite successful demands from $1.25 to $2 per print for 5 x 7 platinums from some of his negatives, and he does not urge them on purchasers, either, and does not care whether he sells a print or not. In other words, he does not make a practice of selling prints, nor does he make a practice of giving them away promiscuously to whoever asks for them.

Amateurs with whom I have come in contact personally and through correspondence are of one accord that professionals have ever been helpful to them, so that with this evidence of cordiality existing between the amateur and the professional, I am constrained to believe that complaints which appear from time to time in the photographic journals are exceptional cases and by no means the rule. I cannot believe that any true amateur would intentionally undertake to decrease the income of one of his professional brethren by underbidding him for work. Let the true amateurs and the professionals join forces to discountenance the "guerilla amateur," and I believe that professional complaints about amateurs will cease.

RICHARD HINES, JR.,
Secretary, Association Camera Club of Mobile.

MOBILE, ALA., Feb. 6, 1900.

DEVELOPERS: OLD AND NEW.

AT a recent meeting of the London Photographic Club, Mr. C. H. Bothamley gave an interesting talk upon the newer developers and their advantages, dealing especially with adurol as prepared by Hauff and Schering. He said: Although his chosen title was "Developers: Old and New," the older compounds would be merely referred to by way of comparison. Some might say that the old developers were good enough for them, and that they did not want to bother themselves with anything new. But we can never say, in this world, that we have attained the best

possible results, or, at any rate, the best under all conditions.

What has been the solid gain to photography through the introduction of these new developing agents? We may most certainly say that they have put the printing of bromide papers upon an entirely new footing. Few realize the enormous difference between the bromide printing of to-day and that of a few years back, when the operator had only one developer —ferrous oxalate—with which to coax an image from the paper. In this important field of work we have at least gained, and we say also that in a lesser degree these new developers have helped us to produce lantern slides on bromide plates with ease and certainty. Some lantern slides, developed with the new agents about which he had to tell, would be shown on the screen at a later stage of his lecture.

The first developer which he would notice, diamido-resorcin, had a close relation to amidol, which, it would be remembered, was nearly allied to phenol or carbolic acid. At the risk of frightening those nervous souls who generally fled at the sight of a chemical or mathematical symbol, he would point out the actual difference between the composition of these bodies. [Demonstration.] Amidol and diamido-resorcin darkened to about the same extent with access to air, an action which was at once retarded by the addition of a preservative such as sodic sulphite. They still darken, but at a slower rate. Amidol crystallizes in white crystals, and diamido-resorcin in small yellowish laminæ. He believed that the extent to which amidol alters in the air has been exaggerated; it seems to be largely dependent upon purity. Here was a bottle of amidol-Hauff, which he had purchased years ago, which was as good as ever. On the other hand, he had another sample, obtained from a different source, which had discolored to an alarming extent. Diamido-resorcin alters very little in the dry state, even if left exposed to the air on a sheet of paper; it should be used with sodic sulphite, and the fact remembered that it is more soluble in a 3 per cent. of that salt than when the strength is raised to 5 per cent. He would hand around prints of bromide paper which had been developed with this new agent, and, although the two prints were of the same subject, they were very different in appearance. The difference was gained by varying the length of time under development. A short immersion in the developer gave a soft negative, or bromide print, but, if development is allowed to go on, you can get as much vigor as you like. The drawback with prolonged development is a deep orange stain, which will affect both gelatine and paper. On the whole, it may be thought that diamido-resorcin does not present any great advantage over amidol.

The next developer to come under review was a very peculiar substance indeed, and its name was hydramine. It is formed by the combination of hydroquinone with another substance, and was presented in the form of plates having a pearly lustre. Dissolved in a solution of sodic sulphite, 2 per cent., with 2 per cent. of potash metabisulphite, it can be left in an open vessel for weeks without getting discolored. One of the most curious properties of hydramine was that it would act as a developer when mixed with water alone. It was unusual and remarkable to find a substance which would do this. He only knew of two others, of which eikonogen was one. Certainly, it took a couple of days to do its work, but still the fact remains that an aqueous solution of hydramine, without anything else, would develop the photographic image.

The developing power of hydramine is not much increased by the usual agents, and the best alkali to use is found to be caustic lithia, which possesses several advantages over caustic potash or soda for the purpose. The composition of the developer recommended in 1000 parts of water is as follows: Anhydrous sodic sulphite, 16 parts; hydramine, 5 parts; and caustic lithia, 3 parts. This solution keeps well, and, even if exposed to the air in an open dish for twenty-four hours, the discoloration only amounts to a golden tint. The addition of a small quantity of bromide to this developer sets up a restraining action, and there is a very decided alteration in the gradation. (A number of plates developed with hydramine were here shown, as were also some bromide prints. The latter showed a tendency to fog, but half a grain of bromine per ounce of developer was sufficient to clear the whites, and the scale of gradation was shortened, as in the case of negatives developed with

the same agent.) Hydramine has no tendency to stain like diamido-resorcin; it is, in fact, a substance of an entirely new class, with certain points of resemblance to both metol and amidol.

The two remaining new developers to which he would call attention were first cousins to hydroquinone, and these again represent a new class of developers. A chemist would describe them as halogen substitution derivatives. These two developers were respectively known as adurol-Hauff and adurol-Schering, denoting the names of their German makers. In the first-named, and comparing its composition with that of hydroquinone, an atom of hydrogen was displaced by one of chlorine; but in the second developer—adurol-Schering—the atom of hydrogen was displaced by one of bromine. One could therefore otherwise describe the first-named as chloro-hydroquinone and the second as bromo-hydroquinone. As they all knew, hydroquinone by itself was not a developer, but each of these new bodies—the adurols—have a faint developing action. They alter very little by exposure to air; they are more soluble in water than hydroquinone, and with sodic or potassic carbonate they exert a developing power greater than that of the last-named.

As they all knew, it was next to impossible to get good results in cold weather with hydroquinone; indeed, on some occasions in winter he had failed with that agent to get the ghost of an image. This is not the case with the adurols. They are good developers for either plates, bromide paper, or lantern slides, and he would show examples of such. Mr. Bothamley's admirable lecture concluded with an exhibition of lantern slides developed by the various agents which he had described, and they evoked much applause.

A short discussion followed the reading of the paper, the trend of which can be sufficiently seen by the following brief summary of the lecturer's reply.

He said, with regard to the amount of bromide added to the developer to affect the color of lantern slides, that, so far as his experience went, the color of the image depended chiefly upon the time occupied in development. If this is retarded by dilution with water or hastened by heat, you get much the same results. The repeated use of the same lot of developer for many plates is a question depending upon the degree of discoloration of the liquid by the air. One of the most useful properties of these new developers is that they do not, like pyrogallol, get rapidly dirty. When they discolor, you must change the solution. All the slides he showed were developed one after the other in their respective developers, only one batch of solution being used for each lot. The influence exerted by the addition of bromide to the developer was by no means the same in every case. With hydroquinone the effect was very great and immediately apparent; with metol, on the other hand, a large quantity of bromide must be employed before one can get any marked result. If the whole of the light action is developed out, much the same result can be scored with all developers, the color of the image being the only point of difference discernible. He believed that the adurols would be found very valuable for cold-weather development, and that they would work well with metol, but his experiments in this direction were not yet concluded.

THE PHOTOGRAPHER'S LIBRARY.

I HAVE often heard people bewail the scarcity of photographic literature. The information obtainable on any special subject in which they may happen to be interested is fragmentary and incomplete. There is some truth in this contention, and I have both respect and sympathy for the man who is seeking information and who cannot find it. But such a man is to be envied rather than pitied, for the man who has a desire to gain information not only has the probability of advancement before him; he has the capacity to take pleasure in his work. I know of no occupation more delightful than photography for a man whose soul is in his work, and most of our workers of standing, if not all, are men who have come into photography for love of the art. Like the journalist and the sandwich man, the photographer is seldom born to his trade.

There is no standing still in photog-

raphy; a man is doing better work to-day than he did ten years ago, or else he is doing worse work. Look at the "new men" who are forever coming up. There are lots of good workers quietly improving, and when some day their work attracts national notice, no one will be more surprised than themselves. Improvement must come very largely from observation. A man who sits at home and never either sees or reads cannot improve unless he be an exceptional genius. A man who does grow under such conditions would, if he came out of his shell, be a power in the land.

There should be, not only in every photographic home, but also in every photographic workroom, a shelf for magazines and books of reference. The home might possess as many books as may be needed from time to time—books on new processes or of improvements, and books of general information which may be picked up in a spare hour.

What books should be read? There are some books which are not worth opening, much less worth shelf-room; others may be read and re-read. I commenced my photographic career with the advent of the dry plate, and have never worked wet collodion. But I have learned much from books older than dry plates, older even than the wet plate. For downright thorough information, which will bear thinking over, I know nothing to equal Mr. Wilson's books and the English book entitled *Photography*, by Brothers. Such books as *Photographics* and *Quarter-Century* bring us to the question of "What is reading?" Too often we read a technical book as if it were a newspaper or a novel. A good book cannot be read quickly. We do not wish to glance over the words; we want to get the facts. A single sentence often gives much to think about, and it is only by studying and re-reading that we begin to get an idea of what the book is and what it can tell us. To read a book hastily or superficially is to miss all the teaching of it; or, if any be not missed, it is misunderstood. Are you busy with carbon work? There are several little books on the subject. A few weeks ago I met the man who is, perhaps, the cleverest carbon man in the States. He told me he had just heard of a new book on carbon, and had bought a copy. He read every word on carbon that he could get hold of. To the young photographer who wishes to learn I would suggest going slowly. Don't buy a big lot of books. More important than buying is reading. When you have got a simple book and altogether *understand* it, get a more advanced one. Are you interested—as of course you are, for it is your bread and butter—in portraiture? When you think that you understand your posing, and lighting, and line, take a copy of *Mosaics*. Don't spend ten minutes in glancing through the pictures, but spend ten minutes in studying one of them. *Study* the pictures. See how the figure is placed in the space. Study the lighting and the balance of the lights. Perhaps you will find some pictures that are not so pleasing as others. Find out why. Do not dismiss them all as merely pretty. And when you have spent half an hour studying a few pictures, put the book away on your shelf where it may be picked up again and not forgotten. One of the most important things in connection with a library is the knowing of what is in it. When a book has been carefully read once or oftener, a good general knowledge of its contents is gained. When some particular detail crops up, it should be easy to go to that book and turn over its pages to the required note. This suggests that a library should be carefully kept. All the copies of magazines should be kept in order if not bound. Pick up the December issue of your magazine, and there in the index you will find the title you are hunting for. —*A Practical Printer.*

THE IOWA CONVENTION.

THE tenth annual convention of the Photographers' Association of Iowa is announced to be held at Des Moines, May 15, 16, and 17. Professor Wallace will again lecture on the art side of photography, and other profitable features are being arranged for. The prize list is as follows:

Special Class. Open to professional photographers outside of Iowa. Six pic-

ures. No restriction as to size. Gold medal for best exhibit.

The following classes are open only to members of the P. A. of I., in good standing and residents of Iowa:

Highest Honor. A certificate of honorable mention, signed by the judges, will be given to each member having a picture selected for the Salon. For the Salon the judges shall select from any exhibit made at this convention only such pictures as have great merit and shall be deemed worthy of becoming part of a permanent collection. The pictures selected shall become the property of the Association. Not more than one picture from each exhibit shall be thus chosen.

Prize Winners' Class shall consist of those who in previous years have won prizes in Class A or the Sweepstakes Prizes; or the first prize in this the Prize Winners' Class. Any person eligible to this class shall not compete in any other class, except the competition for the Sweepstakes Loving Cup and the Miniature Class. Six pictures required, thirteen inches or larger, or twelve pictures under thirteen inches. Gold Medal.

Sweepstakes. Open to any photographer in Iowa who is a member of the Association, regardless of the class in which he or she exhibits. The prize will be a valuable Silver Loving Cup, the same to be held by the winner one year, or until next meeting, at which time it is to be returned to the Association for competition again. Anyone being awarded this cup at three successive meetings will become owner of the same, and hold it as a token of success. Six pictures required, thirteen inches or larger, or twelve pictures under thirteen inches.

Class A. Open to all members, except those eligible to Prize Winners' Class. Six pictures required, thirteen inches or over, or twelve pictures under thirteen inches. First, Gold Medal; second, Silver Medal.

Class B. Open to members from towns of five thousand or less inhabitants. Twelve photographs, cabinet or larger. First, Gold Medal; second, Silver Medal; third, Bronze Medal.

Class C. Open to members from towns of two thousand five hundred or less inhabitants. Twelve photographs, cabinet or larger. First, Gold Medal; second, Silver Medal; third, Bronze Medal.

Miniature Class. Open to all. Required: twelve pictures four inches or under, to be framed under glass, either separately or collectively. First, Gold Medal; second, Silver Medal; third, Bronze Medal.

All exhibits are to be sent, prepaid, before May 10.

Entry forms and all particulars as to conditions of competition may be obtained from

W. O. Reed,
Secretary.

Missouri Valley, Iowa.

HOW TO GET BETTER PRICES.

"You often tell us things in your Magazine which are a powerful sight of help, and I want to tell you how one pointer in it paid my rent for me. I began taking your Magazine seven years ago, when Mr. Hyatt gave me the first copy, and I intend to get lots more value out of it in the next seven years. I got $2.00 and sometimes $2.50 a dozen for my cabinets, and what you said about having leading lines, and different mounts and trimmings and other things to make novelty, set me to thinking.

"I had always used the one kind of mount, but now I got a hundred large mounts, six different shades and styles mixed, and the next time I had a good sitter I made two fine negatives. Instead of making a dozen prints all alike and mounted alike, I made six from each negative, and I trimmed them different. Some were oval and one was round, and with the square-cornered ones I trimmed them two or three sizes. And I printed six on glossy and six on matt paper, and mounted them on the fancy mounts. People were taken with them at once. It was like all the pictures being different, and I put my price for them right up to $4.00. I reckon that fifty cents is enough to cover all the extra expense, and more, and so I clear a dollar extra on each lot. In one year I made more than fifty dozens of this kind of print, and as my rent is $80.00 a year, you see it was all paid for.

"I found out that when the photographs are different, people choose one rather than another, and so I often have people come back for three or four more of the kind they like best, and I guess I should get very little of these repeat orders if the prints were all alike. I have done with grubbing along, and now I am going to watch for new things to please my customers.

"Yours fraternally,

"A—— T—— S——."

EDITOR'S TABLE.

Moments in Art is the title of a fine little volume, about the size of *Mosaics*, published by Messrs. A. C. McClurg & Co., of Chicago. Every fervid artist should have and use it as a proper hand-book. It is make up of selections of prose and verse chosen from a broad range of the best authors, full of noble and useful thought for the maker of pictures of whatever kind or class. All the selections aim high for art and make inspiring study. Famous pictures, famed artists, and all varieties of art work are remembered—works of art from St. Peter's down to the Lion of Lucerne, from Moses to Venus de Medici. The numerous quotations from Ruskin are particularly acceptable just now, when our hearts are all bereaved by the recent demise of that beloved art-writer.

The place of honor on the first page is given to Longfellow, who says: "The world of art is an ideal world—the world I love, and that I fain would live in; so speak to me of artists and of art." As good pictures are, so is this capital little volume: all elevating and refining. It is bound tastefully in green cloth, with decorative, gilt-cover design and gilt edges. Price, $1.00.

The Eastman Kodak Co. have favored us with a copy of their *Advance Kodak List for 1900*. It is a great help to the buyer and must serve until the regular catalogue is ready in the spring. The newest thing in it we see is a No. 1A Folding Pocket Kodak (see page 7) for pictures 2½ x 4¼. This must become a very popular instrument with kodakers. Its capacity is twelve exposures without reloading; 5-inch focus lens. Cartridges may be had to suit it for six or for twelve exposures, and all at remarkably reasonable prices. The pictures are rectangular—another advantage.

The Successful Man of Business is the title of a new book that has come to our hands, written by Benj. Wood, Esq., a successful merchant in New York and San Francisco. Thousands of employers *will thank* him and tens of thousands of employés *ought* to thank him for taking the pains to supply such a helpful work. We wish we could induce every employé in our American photographic galleries to study it and heed its counsels. The author points out honesty, perseverance, sobriety, economy, and concentration of effort as "*the way*" to success. There is no "royal road," according to his experience and observation, and he relates that of several noted men of business and fame as well as his own. His chapter to "Employés" is the one particularly needed by the hopeful branch of our craft. Among other things he says: "Be agreeable, not intimate; pleasant, not offensive; open to instruction, not conceited; truthful under all conditions, and careful of your speech; make no promises which cannot be fulfilled; if you know of any improvement in your employer's business, suggest it at once." The book is not a very *large one*, but, like the advice above, is a very *sound* one. It is published by Brentanos, Union Square, New York, and is illustrated with portraits of several noted gentlemen who have been and are "successful."

Mr. E. J. McCullagh, of Stockton, Cal., whose recent work in portraiture and genre has given him a high position among the photographers of his State, writes: "Enclosed find three dollars to renew my subscription to the Magazine. It gives me many good ideas and much to think over. Mr. Tennant is starting a series of papers that should do us a world of good—on the use of the individual 'think tank.' My experience has been that if I pleased the patron I had no trouble to get any reasonable price for my work. To think, read, study, plan, and experiment is to produce good, solid, attractive, salable work; then orders, money, contentment follow. Success to you in your work."

A very dainty portrait of Miss Edna May comes to us from the Photogravure and Color Co., of New York, in the form of a decorated calendar of the month. It offers a fine suggestion for a photographer's advertisement, the mention of which brings up the question: Why did not the photographer who made this portrait get due credit for his work?

THE series of papers on the war in South Africa, which are now appearing in *Scribner's Magazine*, are illustrated from photographs taken on the field of war by a photographer sent to the front for that purpose. The articles and the pictures are well worth seeing.

WORTHILY HONORED.—A Greensburg, Pa., paper gives the subjoined tribute to Mr. C. C. KOUGH, of that town, the maker of the fine frontispiece in our January number:

"WORTHILY HONORED.

"*Leading Photographic Journal Favors a Greensburger.*

"One of our local photographers, C. C. KOUGH, has been highly honored in that WILSON'S PHOTOGRAPHIC MAGAZINE, a New York City publication, and the leading journal on photographic and art work, publishes in the January number two reproductions of his sittings. The two largest pictures in this number are both those of Mr. KOUGH'S. He has had the additional honor of having one of them occupy the frontispiece page.

"We quote this from the editorial in connection with this picture: 'Probably no exhibit at the last Celoron (N. Y.) convention attracted more interest than the single print sent by Mr. C. C. KOUGH, of Greensburg. Its peculiar roundness, relief, and exquisite modelling provoked innumerable questions as to the special lighting employed. . . . .'

"When we say that Mr. KOUGH is far too good an artist to waste his talent in a town anything like the size of Greensburg, we simply say what every judge of good, finished pictures says and knows. He has made photography a life-study and is thoroughly wrapped up in it. This has been the secret of his success and a bright future certainly awaits him.

"In this connection we will add that he has recently had three splendid offers to identify himself with large, reputable studios. One of these offers comes from San Francisco and two of them from New York City. In all probability one of the positions will be accepted, and in that event Greensburg will lose a most affable and desirable citizen."

We congratulate Mr. KOUGH upon the publicity and encouragement which the publication of his work in these pages have brought him. The sentiments of the local paper have been repeated by correspondents in several States to whom Mr. KOUGH'S picture appealed by its remarkable quality. The praise is well deserved, and the fortunate photographer will, we hope, secure the substantial recognition his work warrants.

THE *Ladies' Home Journal*, Philadelphia, offers $100 for the best single photograph of a booth or stall at any fair or festival, and $75 for a picture of a window garden. Particulars may be had from the *Journal*.

THE *Chemical Price List* of CHAS. COOPER & CO., 194 Worth St., New York, is a handy price-current reminder, which should find a place on the photographer's desk. It is published monthly, and can be had on application to Messrs. COOPER & CO.

MR. HERBERT RANDALL, of Ann Arbor, Mich., and New Haven, Conn., has purchased and refitted the Lloyd Gallery, at Hartford, Conn. The new establishment was opened by a public exhibition of portraiture, which was well attended by the ladies of Hartford. Mr. RANDALL has our best wishes in this latest venture, and Hartford is to be congratulated in having the services of two portraitists so skilled as Mr. RANDALL and Mr. CHARLES T. STUART.

GOLD MEDAL TO MR. LOUIS E. LEVY.—The Franklin Institute has awarded the "Eliot Cresson" gold medal to LOUIS EDWARD LEVY in recognition of his latest invention, known as the "Acid Blast," described in our pages some months ago. This medal is the highest award in the gift of the Institute, and was voted to Mr. LEVY at the recent meeting of the Committee on Science and Arts, in accordance with the recommendation of the special committee of scientists and experts to whom Mr. LEVY'S invention was referred for investigation nearly a year ago.

FIRES are reported from the studios of PHILIP RYDER, of Syracuse, and GEORGE BASSETT, Fifth Ave., New York. It is a good time of year to look after your insurance policy; see that it is paid up to date, and that it covers the list adequately.

OUR April number will be a grand FALK number, with a fully illustrated description of the beautiful gallery which Mr. B. J. FALK has equipped in the Waldorf-Astoria Hotel of this city. The gallery really surpasses description, a personal visit being required to fully grasp its many unique features, decorations, etc., but we will do our best to "personally conduct" our readers with the help of our engravings.

AN interesting paper on several recent copyright decisions is in preparation for the April issue of this MAGAZINE. Look for it. The subject is one of much importance to the craft at the present time.

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Vol. XXXVII. ✣ ✣ ✣ No. 520.

APRIL, 1900.

WILSON'S PHOTOGRAPHIC MAGAZINE

DEVOTED TO PHOTOGRAPHY, MONTHLY: ILLUSTRATED.

OLD vs. NEW METHODS IN PORTRAITURE . . . 145
MERCURIAL INTENSIFICATION BY MODERN METHODS. By Dr. J. M. Eder . 148
NOVELTIES. By R Hessing . . . 149
THE PHOTOGRAPHER'S POSITION . . . 151
BICHROMATE POISONING . . . 152
CONTROL IN PRINTING. By Ralph F. Turnbull . . . 153
HALATION, AND ITS REMEDY . . . 153
ENLARGED NEGATIVES. By W. J. Brooke . . . 156
FUGITIVE PRINTS . . . 158
THE NEW FALK STUDIO, N. Y. . . . 161
PAPERS BY PROFESSIONAL PHOTOGRAPHERS. By John A. Tennant . . . 167
A NEW COPYRIGHT BILL . . . 171
LETTERS TO JACK—AND THINGS OLD AND NEW . . . 172
THE STRAUSS STUDIO, AFTER THE FIRE . . . 176
HOW PHOTOGRAPHY HELPS . . . 177
A LEADING LINE . . . 180
PHOTO-CERAMICS BY THE PEPPER PROCESS. By P. Eliff . . . 182
PHOTOGRAPHS IN COLOR . . . 183
PHOTOGRAPHS IN PLASTER RELIEF . . . 184
THE QUESTION OF STUDIO LIGHTING. By Wilbur Grubeman . . . 185
A GOOD NEGATIVE . . . 186
WHEN SOMETHING GOES WRONG . . . 187
STAINS ON FINGERS AND ON PRINTS . . . 188

OUR PICTURES:

Emma Eames: Portrait by B. J. Falk, N. Y. Print on Special Portrait Velox Paper.
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WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

VOL. XXXVII. APRIL, 1900. No. 520.

OLD vs. NEW METHODS IN PORTRAITURE.

THE last few letters contributed to this series are given herewith. They close a discussion which, as many have written us, has been of much interest and usefulness. The practical outcome of the symposium, as we look at it, may be set forth in a few words. *First.* The photographer should make himself master of the technical and pictorial parts of his profession. Having this mastery, he can, at will, make his work please the individual patron—which is the chief end in portraiture as a profession. *Second.* The photographer, as an intelligent business man, will (*a*) adopt that style of work which will give most satisfaction to the majority of that public upon whose support he depends; or (*b*) he will so develop his individuality (thereby making his work distinctive or unique in character) that he will be raised above the restrictions of locality, and can choose his public, appealing for its patronage on the strength (quality, individuality) of his work.

The average man, dependent upon the average patron, will, we believe, find thoroughly good, straightforward photographic portraiture his surest foundation for financial success. The *other* man needs no counsel, for he will—willingly or unwillingly—be forced by public sentiment or his own development to find or make a place for himself. The practical solution of the problem may be studied (from life) by those who watch the changes taking place day by day in the profession.

Ed. W. P. M.

PREFERS THE "OLD" WAY.

As I look at them, the "old school" gives us first-rate technical work, effectively lighted and carefully posed. Where the *man* has any artistic ability, of course it is seen in his work. In short, the style of the work depends upon the man and not upon the method. The "new school," judged by its average of production, accentuates all that is homely or undesirable in the human face, making old age hideous and youth far from fascinating.

In my personal practice I make portraits such as the individual patron requires. When I have a man whose request is for an "old master" effect, without retouching, full of "values" and what not, I use such a method as will give me these qualities in the finished print. Personally I prefer the "old school" style of good, honest photographic portraiture, and in my practice this style pays best.

With regard to business, prospects never were brighter than they are to-day. People have learned, or are learning, to discriminate in portraiture, and they are more willing to pay for what they want than in former years. The man who can harmonize the good in *all* the schools—subordinating his personal preferences to the demands of his patrons—cannot help but succeed.

Chas. E. Stafford, Chicago.

SENSIBLE EXCEPTIONS.

The "Broadside for the Old" in your February number roused in me the desire to say something. I am not wedded to either "old" or "new," but give my patrons what they want. And, if I attempt the "new" way, I may not allow that I try to "cover incapacity or ignorance" by so doing. Moreover, I am very sure that the workmen I look up to are not

lacking in the least of plenty of ability to produce just what they want—"old" or "new."

Another remark made by Mr. Estabrook I take exception to, viz: If "the painters of to-day excel the old masters in art," how did they reach that excellence? Did they not *base* their art upon the principles laid down by the despised old masters? And is not the consensus of opinion—I mean the opinion of those qualified to know—against what Mr. Estabrook asserts?

W. W. Cowles, Seneca Falls, N. Y.

HARD QUESTIONS TO ANSWER.

As both the old and new school have their advantages, the best way for me to reply is to jot down a little of my personal experience.

From an artistic point of view I find it extremely hard to express a preference for one over the other. In practice I consider that very much depends upon the subject as to which method to pursue. I find it to my greatest advantage to produce effects which best carry out my idea and which best fit my subject.

I have made many portraits in the so-called "modern" or "freak" method, and find it comparatively easy to reproduce characteristic points and attitudes in most subjects. In cases where the work is well executed, and if the subject happens to be an elderly person in whose face time has left its traces and human nature in its varied phases asserts recognition, the general public have been captivated by the telling portrayal of life. And the admiration for the same clamors for more character sketches.

Now, from a business point of view. Watch the lady who comes in for a sitting. She too often agrees with the others that the modern portraits on the walls are excellent, etc. Examining several other samples, she invariably selects one of the old-fashioned pictures—a well-posed and lighted picture, round and well modulated, with enough of detail to show up the gown to good advantage, and where the strong characteristic features are softened rather than emphasized.

In such a case I go to work and make as beautiful a picture of that lady as I can. I look for the best and most flattering view of her face, and pose and light her for that particular view. I am not now seeking an exact likeness. Neither is she. I consider that it would be an easy matter to produce a telling likeness of her; but to make a beautiful picture of her requires considerable art and technical skill.

Therefore, I must admit that while I like and do make many modern pictures, it is only of certain well-adapted subjects. In a city the size of ours, though a highly cultured university place, there is not enough to warrant anything like a specialty in the modern line.

Referring again to the art side as applied to photography, I believe that as much art can be displayed in the old as in the modern method. And I fully agree with Mr. Hemperley in the following lines, which I will take the liberty to quote:

"Every picture-maker should be possessed of more than ordinary intelligence, not only by the study of what others have written and said, but by his own observation of nature, and especially human nature, in all its phases, from the infant in arms to decrepit old age—in health and prosperity, in want, squalor and misery, the knowledge and remembrance of which make him at the time of picture-making feel within himself that subtle something, indescribable yet tangible, which, as if by magic, guides the hand to its portrayal. *This is art.*"

Evan D. Evans, Ithaca, N. Y.

A CHARACTERISTIC OPINION AND A HAPPY CONCLUSION.

The terms "modern," "freak" and "old-time" photography are, according to my observation, at least, used for the most part by people who are influenced by *vogue* rather than an intelligent appreciation of the requirements of portraiture.

"Modern photography" (as you have used the term) is to me, and I presume to all sincere portraitists, a road to more direct expression of forcible phases. Overdone, it results in brutality, as the "old-time" photography overdone resulted in effeminacy.

In my opinion, it is foolishness and unquestionably affectation to use the "modern" style, say of lighting, for all portraits—and I grant that only ignorance permitted us to force all kinds of people

into the mould deemed ideal by "old-time" photographers. Sincerity of purpose, once the essentials are well understood, will lead toward the harmonious blending of the two ways, and result in a truer, purer and more dignified portraiture.

Pirie MacDonald, Albany, N. Y.

P. S.—I always reserve the right to change my opinion.

TELE-PHOTOGRAPHY APPLIED TO ASTRONOMY.

THERE has been much speculation as to the wonders which will be revealed when the tele-photo lens is turned to the stars. The belief that this lens will greatly assist the astronomer is based on a lack of knowledge of the limitations of the lens, and of the requirements of the man who maps the heavens. Much of the work done by astronomers with the aid of photography is in recording fixed stars. What is wanted here is position, and not size of image. To use a tele-photo lens on objects at such a great distance would not have any practical result beyond lengthening the time of exposure, and this is fatal. A record of position being all that the astronomer requires, his wish is to shorten exposure by increasing the intensity of his image, and this he gets by working with the largest aperture possible.

In recording other celestial bodies in which we wish for surfaces as well as position—such subjects as double stars, the planets, comets and nebulæ, and, of course, the sun and moon—the trouble of long exposure again crops up, except in the case of the sun, and the practical conclusion at present is that for this work the lens is no assistance. It is only in the cases of the sun and the moon that this lens is of any real use, and even here it has its disadvantages. Dr. Steinheil, writing in *Photographische Correspondenz*, after speaking of the enormous and unwieldly apparatus which would be required for photographing the planets, speaks of the moon and the sun.

The moon is, doubtless, a more favorable object than the planets for the tele-photo objective. Even if the proportions of the direct photograph were the same as the image seen through a telescope, this would not be objectionable, because the details of the moon are so large and distinct that they may be seen with a very small telescope; but the image is so weak when formed by a tele-photo objective with large magnification that long exposures are necessary. Under such circumstances the movement of the moon in declination is frequently a disadvantage. This cannot be corrected by the clock attached to the instrument, and it is sometimes so great that photography becomes impossible. If the movement in declination, for example, amounts to 2° 50′ in twelve hours, then during an exposure of eight seconds with a tele-photo objective a point would traverse upon the plate so far that the entire image would be blurred. But an exposure of eight seconds would be decidedly too short. It is, however, possible to avoid this difficulty by taking photographs when the movement of the moon in declination is small; but this curtails the use of the instrument considerably. It is best, in photographing the moon, not to use a very long focus, and to enlarge the negative as much as possible for use as a guide in making drawings by means of the telescope. It is, therefore, evident that photographs of the moon taken with the tele-photo objective cannot be used as substitutes for drawings, but they are of supplementary use, and in this way the tele-photo objective may be of value for studying the moon. The heavenly body most suited to photography with the tele-photo objective is decidedly the sun. It is so luminous that instantaneous exposures may be made even with the slowest of objectives. The advantage of the tele-photo objective, very long focus in comparison with aperture, may therefore be utilized to the fullest. At the same time sufficient detail is rendered even by tele-photo objectives of small dimensions, as spots and flames often cover enormous areas of the sun's surface. Sun spots have been observed five times larger than Venus in her most favorable position.

To recapitulate briefly, the tele-photo objective is only of real use for photographing the moon and sun. For the moon, with the limitation that the advantage of the instrument, long focus in rela-

tion to aperture, should not be overstepped; in other words, photographs of the moon made with a short instrument should not be too large. Those who undertake observations of these bodies within the limits I have mentioned will find the tele-photo objective very useful, but those who expect pictures such as we are accustomed to see through the telescope will find themselves deceived.

MERCURIAL INTENSIFICATION BY MODERN METHODS.

BY DR. J. M. EDER.

(Translated from *Correspondenz* in *The British Journal of Photography.*)

AMONGST intensifiers in practical use for gelatino-bromide plates, those which form a black deposit upon the negative play a very important part, as they offer the greatest facility for judging the strength of the image.

Of the old intensifiers of this sort, that formed by a mixture of bichloride of mercury and bromide of potassium, followed by sulphite of soda for blackening the image, has been justly popular for portraiture and landscapes. A new method of intensification with iodide of mercury and sulphite of soda has recently been introduced by Lumière, Frères & Seyewetz, of Lyons. This consists of a solution of one part of iodide of mercury and ten parts of anhydrous sulphite of soda in 100 parts of water, and the negatives, after fixing and washing, are immersed therein. By reciprocal action of the iodide of mercury and the silver, a dark deposit of mercurious iodide is formed ($2HgI_2 + Ag = Hg_2I_2 + 2AgI$), which latter is converted to mercury and iodide of mercury by the action of the sulphite, according to the following formula given by Lumière, Frères & Seyewetz:—

$$Hg_2I_2 + 2\,(SO_3Na_2) = Hg + HgI_2\,(SO_3Na_2)_2.$$

The negative is then washed and treated with alkaline pyro, hydroquinone, para-amidophenol, or some other developer, to blacken the image. The iodide of silver is reduced to silver and the negative rendered permanent.

Another new intensifier has also been recently introduced by the Berliner Actiengesellschaft für Anilinfabrication under the name of "agfa intensifier." This method has been worked out by Dr. Andresen, of Berlin, and his assistant, Dr. Leupold, and depends upon the use of double salts of sulphocyanide of mercury. The intensifying solution is sold in a colorless, concentrated form, which has to be added to nine parts of water for use. The gelatino-bromide plate after being fixed and washed is immersed in this solution. The intensification proceeds gradually, and the deposit is of grayish-black color. By prolonged action great intensity may be attained, even more than with bromide of mercury and sulphite of soda. The agfa intensifier does away with the separate blackening process, and this is not only a simplification, but it also permits of the effect of the intensification being more readily controlled than is the case when the image has to be blackened by a separate operation. The agfa intensifier is excellent, and the question which now arises relates to the effect of this and Lumière's iodide of mercury intensifier in comparison with the older method with bromide of mercury and sulphite. For this purpose I have made a series of measurements of opacity, as described below, by means of Hartman's microphotometer. Gelatino-bromide plates were used, and, after exposure by means of a Scheiner sensitometer, developed with ferrous oxalate and fixed.

1. I wished in the first place to ascertain by measurement the difference between the action of the ordinary mixture of bichloride of mercury and bromide of potassium (1 part of bichloride of mercury, 1 part of bromide of potassium, and 50 parts of water) and a solution of bichloride of mercury (1 : 50). The test plates were exposed with the Scheiner sensitometer. The bleaching of the silver deposit was much slower with pure bichloride of mercury than when it was mixed with bromide of potassium, and the subsequent blackening of the image was much more intense where bichloride of mercury and bromide of

potassium were used, as compared with bichloride of mercury only. The latter did not intensify very appreciably. Both processes showed some loss of density in the finest shadows after prolonged action of the sulphite of soda (evidently due to the solvent action of sulphite of soda upon silver chloride and silver bromide; but, as the former is much more soluble intensification is less).

2. Lumière's iodide of mercury intensifier blackens the negative slowly and continuously, and the color tends to a brownish shade which becomes rather more pronounced by subsequent washing. The treatment with a developer, according to instructions (pyro soda was used), darkens the image, but insufficient washing after intensification gave rise to slight red fog, which was inconvenient. Intensification is, however, very full, and more density is obtainable than with the bromide of mercury and sulphite.

3. The agfa intensifier is preferable to Lumière's, because there is only one solution, and there is, moreover, no risk of red fog, as in the case of Lumière's intensifier, if the plates be insufficiently washed. Density can be pushed very far with agfa. In this respect it surpasses the bromide of mercury intensifier, and is nearly equal to Lumière's.

The following table gives the numbers of the opacities of the strips of the intensified plates:—

Table of Opacities of Dry Plates After Use of Different Intensifiers.

Exposure in candle metre seconds.	Opacities of negative before intensification.	After intensification with bichloride of mercury and sulphite of soda.	After intensification with bichloride of mercury × bromide of potash and treatment with sulphite of soda.	After intensification with Lumière's iodide of mercury intensifier.	After intensification with Andresen's agfa.
1.0	0.36	0.32	0.33	0.37	0.37
1.26	0.41	0.35	0.39	0.43	0.43
1.60	0.47	0.40	0.45	0.52	0.55
2.05	0.51	0.45	0.57	0.63	0.72
2.61	0.64	0.57	0.71	0.75	0.90
3.3	0.73	0.68	0.87	0.93	1.10
4.2	0.80	0.77	1.07	1.18	1.31
5.4	0.87	0.87	1.27	1.40	1.50
6.9	0.97	0.97	1.47	1.65	1.70
8.8	1.07	1.09	1.69	1.89	1.85
11.2	1.18	1.20	1.85	2.03	1.94
14.3	1.32	1.34	1.98	2.15	2.00
18.2	1.41	1.47	2.07	2.27	2.19
23.2	1.48	1.55	2.12	2.33	2.28

It follows from these observations that the old method of intensification with bichloride of mercury and bromide of potassium, followed by blackening with sulphite of soda, is sufficient for most cases, *and is still to be recommended.* But the agfa intensifier, from its simplicity and its greater power of intensification, seems superior, and is doubtless an improvement.

NOVELTIES.

BY R. HESSING.

THE great charm of fashion is its novelty. Occasionally we have something which is equally fashionable and obnoxious, but as a rule the fashionable thing is a thing to be commended. We get used to this new thing and then there is money in it; next we get sated with it, and finally we make tracks after something else, and the man who holds on too long to the old finds himself in the lurch. The man who is in a big centre, New York, or Chicago, or St. Louis, or San Francisco, moves almost unconsciously "with the crowd." Without noticing it he takes up the various styles of picture, paper, finish, mount, but the man who is away from any influence beyond his magazine and his convention, is rather apt to go quietly along and get into a rut. This subject occurred to us in looking over a copy of this MAGAZINE

twenty years old, and seeing a note in it which would bring money to-day. We have often referred to this subject, and quote the remarks made by a contemporary several years ago in referring to what was known as the eberneum process.

A positive vignette was made from a negative in the camera by the wet collodion process, the image being toned if necessary. The plate was then placed on a levelling stand, and a mixture, composed of gelatine and oxide of zinc, with a little glycerine to give flexibility, poured on. When this picture was dry, the picture was stripped from the glass and trimmed. The quantity of mixture applied was such as to yield a film about the thickness of an ordinary visiting card, or perhaps a little thicker.

We do not work wet collodion nowadays, but we have Seeds' positive films, and to digress for a moment, many photographers have no idea of the beautiful possibilities in those films. They use them and get a result which satsifies them, but they are far from getting the best results.

Many years ago some pictures were shown in London that were produced by a Russian photographer—Bergamasco by name—that made a little sensation at the time. They were large, direct portraits vignetted, but, instead of being vignetted into the usual white ground, they were graduated into a black or very dark one. The lighting of the heads, which were from about four to six inches, was of a very bold character, and this was the more striking by the contrast with the dark ground and the dark frames in which they were shown. Although these pictures were very fine, Bergamasco had but few if any imitators here; possibly because of the prosperous state of the portrait business with the usual styles of small pictures then in vogue. This style of portrait might be worth a trial now, as there is a greater demand for large portraits than there was when these pictures were shown in this country.

About the time of the Russian vignette a "secret process" was exploited by a Frenchman. It was his intention to sell the secret, but for some reason the scheme fell through. These pictures were also of a good size, and are somewhat difficult to describe, inasmuch as they had the appearance of great softness, or rather, lacking in sharpness; yet, when closely examined, they seemed to be perfectly sharp. They were exceedingly bold and vigorous, and had the look of being on porcelain rather than on paper.

There were at the time, as may be supposed, a number of suggestions as to how they were produced. One was—and that was the one that received the greatest credence as being the right one—that two negatives, in exact duplicate, were taken, each being developed only to half the usual density. The two negatives were then placed the one upon the other, the prints being made from this compound negative. Another suggested plan was that the plate was coated on both sides with a thin collodion, so that while the image on the front of the glass was perfectly sharp that on the back was, of course, out of focus. One plan that was suggested was to make, say, half the exposure with the lens at its sharpest focus, a quarter with it it racked a little outside the focus, and the remaining quarter with it a little within it.

Here is a method by which pictures, equal in effect to Denier's were produced, and it answered well even with negatives not specially taken for the purpose. It was to print in the usual way until the print was about half-done, and then interpose two or three sheets of transparent gelatine, or a thin piece of glass, between the paper and the negative, and then continue the printing to the proper depth. By varying the depth of printing before its introduction, and the thickness of the intervening media, a great variety of effects can be obtained. Such a plan is simplicity itself, little more than a "dodge," but sometimes simple things bring success.

Toned Bromides, etc.—Platinum and bromide prints may be colored in imitation of old engravings by soaking them in a strong infusion of tea or coffee, according to the tint required. The infusion will keep well in bottles if a drachm of the following mixture is added to each pint of freshly-made infusion: Salicylic acid. sixty grains; alcohol, one ounce. The infusion should be well shaken after the addition of the preservative.

THE PHOTOGRAPHER'S POSITION.

It is interesting to note, on the authority of Mr. A. J. Randall, that the British census officials class photographers under the head of "professionals—sub-section, artists." He points out that probably this classification was made in the early days when photography did not merely, as now, number capable artists among its votaries, but was almost confined to them.

From the introduction of the Daguerreotype until the time of collodion, say from 1839 to 1855, the status of photography stood high; with the general use of collodion and the wearing away of the novelty of the new discovery its position was somewhat degraded. This continued until gelatine and rapid dry plates supplanted collodion, about 1880, since when scientific men, wealthy amateurs, and skilled professionals have helped to raise photography to its first state, and to regain some of its lost prestige.

In 1843 the *Edinburgh Review* contained a lengthy account of photography, giving particulars of the two processes of Daguerre and Fox Talbot, then known, the author even going so far as to rate the Royal Society for refusing to publish its processes in their *Transactions*, and the premier, the government, and the representatives of the people, and the peers, for not adequately rewarding the inventors. He says, in reference to Fox Talbot: "The inventor was left to find the reward of his labors in the doubtful privilege of a patent; and thus have these two beautiful and prolific arts been discouraged.

In the first years, too, it attracted the attention of the leaders of science, men of the calibre of Sir John Herschel, Dr. Draper, Professor Moser, of Königsberg, Faraday, and Crookes, of X-ray fame, investigating its phenomena; men like Arago and Gay-Lussac bringing under the notice of the French government the claims of Daguerre upon national bounty. From that time until quite recently no such list of men of the first rank can be cited in connection with photography in England, Abney having stood almost alone since 1872, and Robert Hunt, with his *Researches on Light*, in 1854, being his nearest predecessor.

Those early days of photography were days of enthusiasm, when hopes ran high, expectation yet higher, and the goal within sight, which every experimenter was striving to reach—the reproduction of natural colors.

Many amateurs, likewise, of the stamp of Fox Talbot and the Niépce family, the most charming of scientists, devoted their leisure and wealth to examining and improving the methods and processes of photography, giving to this pursuit more than they could expect in return. From being at first a simple and not very interesting process of taking profiles of the human face, it called to its aid the highest resources of chemistry and physics; and while it gave a vigorous impulse to the fine arts, it became a powerful auxiliary in the prosecution of physical science, and held out no slight hope of extending knowledge of the philosophy of the senses.

When we speak to that superior person the painter, no half-hearted apology is necessary. The case is tested by weighing all the reputed paintings of Shakespeare against a single cabinet negative of undoubted authenticity. In spite of the artistic skill of the paintings, the photograph would outweigh them, for in that we should behold the man Shakespeare as he lived and appeared in the flesh. This advantage brings photography very close to painting. Never before the present day have photographers had an equal right to compare their productions with paintings, and the comparison in portraiture leaves the victory often with the photographer rather than the painter. In gracefulness of posture, excellence of lighting, the use of accessories, in all matters showing a sense of taste and artistic insight, the photographer is often in front of the painter; in not a few instances he surpasses the efforts of the best painters.

Compare, again, the paintings and photographs of Carlyle, noting the fire and power of his eye in the photographs that no painter can give. The same force of the human eye is also most remarkable in the full-faced photographs of Bismarck or Gladstone, no painter being skilful enough to express this peculiarity.

In these instances the photographer

triumphs because his means of rendering subtle shades are greater, the painter being unable to show upon his canvas those delicate gradations and lines which go to make up the character of a face. Photographs may not be "soul studies," to use the cant art term of the day, but they supply the deficiency of soul by giving fidelity of body. It would be hard to find a photograph that could be said to err from the reputation of a man, yet one has only to look upon the painting of Milton in the National Collection to find it almost impossible to believe that it represents the author of *Paradise Lost*, and, in addition, a man noted for his beauty amongst his contemporaries. In striving for the "soul" the painter is apt to forget the body.

Considering the undoubted superiority of photography over handiwork as a means of graphic representation, the finest painting, etching, engraving, or lithograph, seeming crude and bald beside a photograph, it is only fitting that the status of photography amongst the arts should be much higher than it has been, and as it must be, now that its possibilities have been amply demonstrated by numerous workers. Artists, however, have always shown themselves more ready to cling to old ideals than to admit the new and progressive. For photographers to remain content to accept the value artists choose to put upon their works is for ever to underestimate the powers of the camera when matched against the brush.

There is one point to be remembered. Our guns are all right, but the man behind the guns must be right, too. The artist in color does not triumph through his brushes or his tubes of paint, but the skill and personality of the man make or mar the result. So in photography, it is the work we turn out, not the tools or the method, that counts.

BICHROMATE POISONING.

About fifteen years ago a physician introduced to notice a new disease which he named the "bichromate disease." Very many people have scoffed at the thought of any danger in working with bichromate of potash, and it is only occasionally that a bad case crops up, but a number of workers have suffered from it and have found it very troublesome. The disease is most probably contracted during development, and not in sensitizing, the steady dabbling in the hot water, even with the necessarily very slight amount of bichromate present, being more dangerous than the dipping into a stronger, but cold, solution. The symptoms commence with a very violent itching between the fingers, and this itching spreads to the backs of the fingers, and if the work is kept up the backs of the hands and the wrists become affected. In extreme cases the system seems to become permeated with the poison, and the man in such a condition cannot continue his work. There seems to be no class or type of person more liable to attack than others, and some of the worst cases have been strong, robust men. But heavy or rich living and alcohol seem to foster the disease. As soon as any itching symptom is felt, precautions should be taken, for it is a disease that cannot be eradicated, except by discontinuing the work. The parts must not be rubbed or scratched. At night rub well into the itching parts a little nitrate of mercury ointment, which a druggist will supply if told what it is for. A good lotion which is very effectual in soothing even a violent irritation, is made of pure crystallized carbolic acid, 20 grains; glycerine, 2 drachms; alcohol, 3 ounces.

The only safe way to work after having contracted the disease, is by using rubber gloves. For the man who does a quantity of work gloves are a nuisance, but they are necessary, and a worker will soon get used to them. By dusting them inside occasionally with a little powdered talc they will become easy to put on. If precautions are taken when the disease first appears, it should not cause much inconvenience beyond the wearing of gloves. Unfortunately it cannot be gotten rid of if work with the naked hands is continued. The best precaution to take for one who has never suffered from the disease is to thoroughly wash the hands immediately after finishing work, preferably with a carbolic soap, but as only a small proportion of workers are affected, we shall probably continue to trust to chances.

CONTROL IN PRINTING.

BY RALPH F. TURNBULL.

A CORRECT exposure and a good development are often mere stages in the production of a good photograph. There are many little details which may require attention if we are to get the best possible print. Two of these details are the use of Prussian blue, and the use of tissue paper, to modify the printing. To hold back the thin parts of a negative during printing I take a little Prussian blue water color—that sold in collapsible tubes. Squeeze a little color onto a plate, and with the end of a finger dab some of it over the back of the negative where it is too thin. With a little practice an even tint can be obtained, or it can be blended or graduated as required. The landscape photographer who gets a sky full of pinholes may sometimes save himself much tedious spotting by working in a few judiciously placed clouds over the worst nests of pinholes. Squeeze out small dabs of paint on the back of the negative where clouds are required. Dab carefully over the space where the white cloud is to be, then wipe the finger-tip on a clean rag, and very carefully dab along the edges of the clouds to soften and blend them into the darker sky. By wiping the finger as often as required, more or less of the paint is taken from the glass, and so any desired depth of half-tint is secured. In portrait work a dark background may be faked in this way. A negative treated in this way should always be printed under one or more thicknesses of tissue paper.

Tissue paper may be used instead of the blue paint, and its possibilities should be more fully understood. In a negative with strong contrasts, if there is any detail at all in the shadows, and if the light parts are not hopelessly dense, much may be done. I place such a negative in a retouching frame, and over the glass side of it stretch a piece of tissue. With a pencil I trace on the tissue the outlines of the deepest shadows and cut the tissue so that these shadows only are masked. A second piece of tissue is cut to cover shadows which are not quite as near bare glass; this second tissue also covers the first one, so that the thinnest part of the negative is shaded by two thicknesses of paper. In this way I gradually build up to my highlights, which are left uncovered. I may require as many as five or six pieces of tissue to get the most gradation possible, but it is well spent labor, for many a negative is usable after being papered, which would without it be hopelessly hard.

HALATION, AND ITS REMEDY.

THE question of halation is a chronic one with the man who works out-doors. The vanishing of the finer spray of trees into the sky and the general mistiness around their edges are known to the veriest beginner. When we tackle an in-door subject and aim against a window or other source of light we find the trouble all important. The commonly accepted cause of halation is that the light passes through the film and glass support and is reflected back through the thickness of the glass up the film again. The thicker the glass plate the more is the halation, the light having more room to spread in its reflection. It has been found that if we coat the back of the plate with an opaque non-actinic film, which refracts or bends light just as much as does glass we shall avoid this halation, if the backing film is in absolute close contact with the glass. A French contemporary, *La Chasseur Francais*, sums up the various methods of avoiding halation as suggested or adopted in France.

To M. Guillemont, of Chantilly, possibly belongs the honor of preparing the first anti-halation plates; he flows upon the glass a layer of iodide of silver insensible to light, but of which the yellow coloring constitutes an excellent absorbent. Upon this first layer he places the ordinary layer of silver bromide. In fixing, the iodide of silver dissolves out, and leaves the negative

of a fine transparency and entirely free from halation.

MM. Lumière are equally busy on this important subject; they propose using colored under films by the aid of red or yellow coloring matter, with the object of stopping actinic radiations which so sadly interfere with the sharpness of the image. The under layer is decolorized by an appropriate re-agent after development. The manufacturers have, however, found great difficulty in avoiding diffusion of color in the sensitive film, which leads to a perceptible diminution of its sensitiveness. Nevertheless, they appear to have solved the problem of employing new insoluble coloring matters; the emulsion can be run upon a ruby-red layer without causing any detriment whatever. The development is effected by the usual methods, the red layer acting in a similar manner to a red glass added to the lantern.

After development it is sufficient for the negative to be put into a solutien of sulphite of soda with the addition of acetone, in order to see the red coloring matter quickly disappear without leaving the slightest perceptible tint.

Many powders have been suggested to bring about these results, a few of which it will be of advantage to consider. M. Cornu prepared a mixture of 6 parts of turpentine and 1 part essence of clove. This mixture should have the same index as the glass. To it is added lampblack, so as to obtain a kind of paint, which we spread with a brush on the back of the plate; before developing remove this layer by means of a piece of rag.

MM. Brothers suggest coating the plate at the back with a film of normal collodion containing a small quantity of chrysoidine; this method has proved entirely satisfactory for astronomical photography; it is not necessary to remove this film of collodion before developing, as it does not hinder in any way the examination of the negative during working.

In the place of dry collodion one can use a paste composed of dextrine and ochre, with the addition of water. This method has been taken up by M. Drouet, who has given an accurate formula, enabling the operator to avoid all uncertainty in working. This mixture is a dry one: Ordinary red ochre, 100 parts; dextrine, 50 parts; then add water, 50 to 55 parts; glycerine, 1 part. The paste thus obtained is passed through a metal restrainer, so as to eliminate all grains of dirt, which would form streaks when spread. This stained paste is applied to the back of the plate with a large brush. When viewed by transmitted light the film should be absolutely opaque. This must be allowed to dry without exposure to light, after which work can proceed as usual; the backing can be easily removed by a damp sponge, but care must be taken that the moisture does not get on the film side.

M. Godde, who takes exception to this last method on account of the length of time necessary for the drying process, and the great care required in cleaning, so that the film is not soiled, has suggested another layer as follows: Beeswax, 25 parts; paraffin, 35 parts; vaseline oil, 35 parts; earth of Cassel, 50 parts.

In a hot-water bath (a glue-pot will be found very suitable) he puts the wax, paraffin, and vaseline oil, then places it on the fire until these various substances are thoroughly melted; then adds little by little the earth of Cassel. After the mixture is well blended it is spread over the back of the plate by means of a soft brush, and at once put into the frame.

Before developing the composition is readily removed by means of a scraper made out of a piece of vulcanite. As may be seen by experiment, these methods will not fail to do away with all halation by reflection; they each give the same results, so that the reader need only be guided by his personal preference.

Before closing reference ought to be made to the experiments performed by manufacturers in order to place upon the market a perfect anti-halation plate. This is an important subject, for in all plates halation is more or less pronounced, and to do away with it entirely results in very superior work, by producing stronger and more brilliant negatives. It goes almost without saying that anti-halation plates ought to be everywhere in common use for all photographic work of whatever kind.

Those who will not use the methods referred to may be reminded that halation by reflection does not show itself upon films or film papers. The various methods detailed are worth trying; the worker will be able to prove for himself the great advantage there is in suppressing halation by

reflection. He will prove this not only in the production of ordinary negatives, but equally in the making of transparencies on glass intended to be viewed by transmitted light or by projection by the lantern.

PRINTS ON FABRICS.

BY FR. RANKIN.

We are at present in a period of much wideawakeness. There is more experimenting in new directions in four weeks of 1900 than in four years of the sixties. I refer here to minor directions, the reaching after embellishments or novelties, and must not be thought to be suggesting any comparison as to the quality of work at different periods. Among other things, the sensitizing of fabrics has been tried in an experimental way for some time, and is now achieving some commercial success. This success is not confined to the sensitizing solutions, such as Sensitol, which are finding favor with amateurs and are worthy of note by professionals, but also applies to professional work, on which several firms are specializing.

With the many fabrics available, from silk to linen, and with wide choice of fineness or coarseness of texture, any effect may be obtained. For small pictures the finest of textures should, of course, be chosen, but those who suffer under an undue strain of art may sensitize a piece of sailcloth and make on it an enlargement suitable for a tapestry hanging.

Whatever material be chosen, it is advisable that it should be new, and, further, should be freed from the dressing with which too often such things are weighted. After the washing it is advisable to allow the material to nearly dry, and then iron it with a fairly hot iron, so as to take out the creases as far as possible. When this has been done the fabric is ready for sizing, which, although not absolutely necessary, is preferable, as it tends to keep the image more on the surface, no matter what may be the after-sensitizing. This sizing is effected by making a 1 per cent. solution of hard gelatine, and drawing the material through this solution, which, for convenience, may be placed in a porcelain dish. The fabric should then be hung up to drain and dry, and in this condition will keep for any length of time.

The simplest method—but one which is capable of satisfactory results—is the common blue-print. The formula and manipulation of this is simplicity itself. No. 1—Ammonium citrate of iron, 1 ounce; water, 4 ounces. No. 2—Potassium ferricyanide, 1 ounce; water, 5 ounces.

The ammonio-citrate should be in clear red-brown scales, without any brown powder, and the red prussiate must also be quite free from any adherent powder. It is advisable to just rinse the crystals with water before dissolving: When the salts are dissolved the two solutions should be mixed and filtered and kept in the dark. While these solutions will keep, it is advisable not to mix up more than is required, or otherwise they are liable to give impure whites. To sensitize the fabric it should be placed on a sheet of glass and the solution brushed over it by a camel's-hair brush. The solution should be placed in a measure or saucer, handy, and as even a coating as possible given, if necessary passing the brush first in one direction and then in the other. The sensitized material should be dried as quickly as possible—in about four hours at the most; and whilst there may be no difficulty about this in summer, it may be necessary in winter to use a drying-box, or else to allow it to partially dry, and then iron with a warm iron between pure blotting-paper. Little need be said about the printing or development, the former being done as usual, and the latter, as is well known, by immersion in water. If the water is very "hard" it is advisable to use, first of all at any rate, water acidulated with hydrochloric acid to prevent the precipitation of basic iron salts in the fibres.

Silver-printing processes may be divided into the printing-out and development methods, and of these there is no doubt that the former is to be preferred. For printing out, the simplest plan is to immerse the fabric in a 3 per cent. solution of common salt or ammonium chloride for five minutes, then to blot off between blot-

ting-paper, and then sensitize in a 5 per cent. solution of silver nitrate, and dry and print as usual. The disadvantage of this method is that the image is entirely in the fibre itself of the material, and, therefore, the resulting prints are somewhat flat and poor. A better method is to soak forty grains of hard gelatine in one ounce of water for half an hour, dissolve by the aid of heat, and add fifteen grains of ammonium chloride, and having fastened the fabric by drawing-pins to a flat board, or else lay it on a sheet of plate-glass previously talced, and then coat with the salted gelatine by means of camel's-hair brushes, then allow to dry, and then sensitize with a thirty-grain solution of silver nitrate.

Coblenz has suggested recently the by-no-means new method of using a 1 per cent. solution of Iceland moss instead of the gelatine; but, so far as our experiments have gone, this presents absolutely no improvement on ordinary gelatine.

There is one little difficulty in using printing-out processes which will very soon be met with in practice, and that is the stretching of the fabric during the examination of the progress of printing. To avoid this, it is well to mount the fabric to a card, using a little india-rubber solution, and just fastening it by its edges.

As regards the toning and fixing operations, little need be said, except that it is as well to plunge the fabric, before toning, into salt and water, which, converting the free nitrate into chloride, prevents the staining of the fibre to a great extent. This is followed by subsequent washing and toning in any ordinary gold bath, such as is used for albumenized paper, only half the strength, will give good results. If a uranium and gold bath be used, and the fabric be deeply printed, rich warm black tones may be obtained, though these may be more easily obtained by using platinum, followed by gold, as has been lately recommended in our columns. The fixing-bath should be half the normal strength, or otherwise the print loses too much.

Next comes Sensitol, a sensitizing fluid containing a soluble salt of silver. This applied to fabrics and other water-absorbent materials with a brush, tuft of cotton, or by floating, gives a rapid printing-out surface with a single application. The prints are vigorous and brilliant, and are infinitely variable in tone, depending on the nature of the toning-bath used. As the image produced is a silver image, it may be toned with any of the standard toning-baths. When Sensitol prints are toned with platinum they are practically indelible, for any reagent that will dissolve the platinum will at the same time destroy the fabric. Both the beauty and stability of the Sensitol prints are enhanced by platinum toning, and this toning is best effected with tonplatinol, which is radically different from all of the other known toning-baths, in that the only metallic salt it contains is the chloro-platinite of potassium. It tones the silver print to intense black, with pure whites, in a single bath, no preliminary gold toning being necessary or even advisable.

Sensitol, therefore, with tonplatinol, gives us the means of making indelible photographic prints of great beauty and clearness on all sorts of fabrics and other water-absorbent materials at will.

ENLARGED NEGATIVES.

BY W. J. BROOKE.

THE old controversy of large *versus* small (generally hand) cameras seems of late years to have gradually settled down in favor of the small camera. This, of course, means a large increase in the number of people who go in for enlarging. The simple, direct and beautiful process of direct enlarging on to bromide paper deservedly has a large number of advocates; but there may arise a time when bromide papers will no longer lend themselves to the effect sought, and recourse must needs be had to carbon or platinum. This, of course, means an enlarged negative, and it is with the best means of obtaining these from the good, bad and indifferent negatives in our possession that the present article deals.

We can make our negative in two ways —first, by making an enlarged transparency, and from that the negative; or make a small transparency by contact, and en-

large from that. Both are good, and in competent hands may be made to yield excellent results; but in the former method the extra expense of a big plate has to be coped with, so that we shall only deal with the second.

This method has a further advantage in that a very great amount of control is placed in our hands. To deal with the transparency first: This should, in most cases, contain a full amount of gradation, and in this differs from a lantern slide in that no, or hardly any, clear glass should be visible; all the detail apparent in the small negative must be in the transparency, and this combined with unclogged shadows, which should be deep, but luminous. The transparency may, indeed, appear somewhat flat, though it must not be too flat.

If our original negative be a good one, with fair average density, then the carbon process is undoubtedly the best whereby our transparency may be made, for by its aid a tone replica can be produced, since variation in the tone values are not so much varied by differences of exposure and development as in the other methods of producing positives.

For carbon work black transparency tissue should be used, and for normal or dense negatives a 5 per cent. solution of bichromate should be used for sensitizing. If, however, the negative be thin, a much weaker solution may be used, even as weak as 1½ or 2 per cent. After exposure, which should be carried at least three times as far as for a print on paper, the tissue must be squeegeed on to a clean piece of glass free from blemishes, and developed on that in the usual way.

It is generally recommended that the glass on which the tissue is developed should be flowed over with a 2 per cent. solution of gelatine, to which a few grains per ounce of bichromate of potash has been added, and when dry the plate to be exposed to strong light to render the gelatine insoluble. This is supposed to preserve the faint details of the high-lights from being washed away. This, however, in our opinion, is quite superfluous, as perfect adhesion without any perceptible loss of detail is obtained with plain, unprepared glass, especially if a little longer time be allowed to elapse between mounting and developing. When finished, the positive must be allowed to dry in a place free from dust.

If, however, the carbon process be objected to, from any reason, we can still make our transparency by contact on to a gelatine plate.

For this, either a process, transparency or slow, medium, or rapid bromide plate may be employed. Any one, however, will not do; each one has its peculiarities, and each must be employed where such peculiarities may be used to advantage.

If our negative be thin and flat, and pluck be desired in the finished enlargement, then we may employ a process plate, and by giving a suitable exposure (rather under than over) in artificial light, and developing in a well-restrained developer, we may obtain a much bolder image, which can be again increased in pluckiness by enlarging on to a slow bromide plate.

With a negative yielding a good print on print-out paper—that is to say, a moderately thin one, but free from flatness—then a transparency or slow bromide plate may be used to advantage. With these plates, however, care must be taken to give plenty of exposure, in order to obtain a nice, soft positive, with plenty of detail in both shadows and high lights.

All these processes will, with care, yield a nice, soft transparency, if a little care and thought be used when selecting a medium on which to make it. They also possess the advantage of giving a very fine and almost grainless deposit, which is, of course, of first importance when any degree of magnification is desired.

However, if our small negative be harsh and dense, a very passable result may be got by making the positive on a medium, or, in extreme cases, a special rapid plate; the more rapid the plate the softer the result in the generality of cases. This property may be further extended by printing in a stronger artificial light than in the cases of a slower emulsion. In developing these extreme cases a developer weak in reducer and restrainer should be used, care being taken to keep the plate well out of the red light, or it will be fogged. On the whole, it is perhaps better to use a fairly constant source of illumination for both slow and rapid plates, and by placing the printing frame nearer or further away, so make up a weak or strong light, as the case

may be. In all cases we must remember that the strength of the light varies inversely as the square of the distance from the light.

If possible, however, it is much the better plan, in the case of harsh negatives, to use the carbon process, the tissue being sensitized in a stronger bath of bichromate —say 6 per cent.

We have now got our positive, and at this stage we may make any alteration deemed necessary by means of local intensification or reduction. If a landscape, then the addition of clouds may be necessary. These are best obtained on a separate plate, and so bound up that the lighting of both sky and landscape are from the same point. Care should be taken to not make the clouds too dense. The best way is to place the landscape positive in the frame in front of the sky negative, and by using this as a mask prevent any of the sky from overlapping the landscape. The two transparencies are then bound up together in correct register, and are ready to be enlarged from.

In making the big negative, either glass plates or bromide paper may be employed. With the former, advantage may be taken of the different brands and rapidities to obtain still further variations if such be needed, slow plates giving greater contrast, while rapid ones give reduced contrasts. Of course, it must be always borne in mind, in order to insure certain results, that the operation of enlarging always tends to give harsher gradations than is contained in the small image.

Bromide paper is very useful as a medium for the making of our large negative, fine smooth paper of as rapid a character as can be obtained giving best results.

The grain of the paper support is, of course, generally somewhat visible, especially when such fine detail-giving papers as print-out paper or bromide are employed for the final print. If, however, a short supplementary exposure be given to the back of the paper negative before developing, a negative impression of the grain is produced in the emulsion, which neutralizes any ill effect if properly done; still, as it is very easy to overdo it, it had better be omitted, and the grain destroyed by oiling the back of the negative, any surplus oil being removed by means of a cloth. This will also bring the negative almost up to the level of a glass plate as regards quickness of printing.

Again, if carbon prints are to be made from the paper negative, and if the length of time taken in printing be no objection, then the grain may be left undisturbed, as it will not be noticeable in the resulting print.

When developing a paper negative care must be taken to carry development far enough, as the image backed by the paper will appear denser than it really is.

Finally, to sum up the advantages of paper negatives over glass ones, we have (1) greater portability, (2) lower cost, (3) non-liability to breakage, and (4) greater ease of stowage.

We can also make any necessary retouching on the back with very great ease. and can just as easily remove it again. Lastly, we can print from such negatives from either side, a by no means small advantage in carbon printing.—*News.*

FUGITIVE PRINTS.

We are often asked if the photographs of to-day are as permanent as those made in the sixties. The answer given to this question, more especially by older workers, is a simple *No*. At first sight this seems the right answer, for in turning over an album of photographs produced within the last ten years, we may see more evidence of fugitive prints than we see in an album devoted to crinolines and stove-pipe hats. But a little closer examination of the subject gives a more satisfactory reply to the question. The universal pursuit of photography to-day, and the ease with which the unread and inexperienced may produce results which are acceptable to many people has led to the turning out of immense quantities of prints by persons who have not the most elementary knowledge of either the chemistry or the science of our art. Forty years ago—twenty years ago—a photographer occupied—apart from his art position—the honorable place of a master craftsman. He manufactured his own plates and his own paper, and instead of buying gold chloride for

his toning bath he made his own, dissolving a gold five-dollar piece. Then each picture had behind it solid work and sound knowledge. Nowadays we too often go for the result without knowing how that result is obtained. Another factr, as important as the questions of care and knowledge, is that of cost. *The British Journal of Photography* some little time ago spoke sensibly of this. Photography and photographic materials are subject to the same craze that is eating into the integrity of almost every manufacture of the present day—the craze for cheapness. We do not say anything about cheap paper; there is plenty of good paper on the market—little of it, indeed, is anything else—but we have cheap (and nasty) "hypo," cheap chloride of gold and other chemicals.

The question of the mount is, fortunately, not as troublesome here as in Europe. We have American-made mounts which are the envy of foreigners, and the quality is so rigidly maintained that we feel quite safe on this score. In England and in Germany there are mounts manufactured which will compare favorably with any. But there are, too, very impure mounts made there, and until a batch is thoroughly tested it is impossible to feel safe when using them. The endeavor by new makers to put on the market mounts at a price that should beat down all competitors has led to the production of a cardboard whose composition was such that it could not fail to be injurious to the prints mounted upon them. Professional photographers have told us the same thing; they point to prints mounted upon boards ten or twenty years ago, when one or two makers held the command of the market, which prints were still in good condition, while later prints, produced with equal care and under precisely similar conditions, but mounted on another make of card, have become utterly ruined, potty and bleached in an irregular manner. We believe it to be a fact that one large foreign mount-seller some years ago admitted that the cardboards he had been using proved to be defective in this way. It was explained that the makers of the card, and the seller of mounts cut to sizes and printed, etc., were two distinct classes; the cutter—whose name only appeared—was dependent upon the seller of the raw material. Be that as it may, it is very probable that this competition among mount-sellers—who are now to be found in France, in Germany, in Austria—has in too many cases, though productive of lower prices, been disastrous to the integrity of the photographs mounted upon them.

It is only a very few years since the photographer had a brief attack of the combined bath craze. He got over it quickly, but the effects remain in albums. We hear too much of striving after novel tones. If we wish to tone platinum paper, in which we have practical permanence if handled properly, to some color which the makers never dreamed of, and with some chemical which we do not understand, we must not be surprised if our experiments cause trouble a few years hence. The whole matter may be summed up briefly: we are fortunate in being able to purchase everything required in a pure condition—paper, emulsion, chemicals, mounts—all above suspicion. We have, too, definite knowledge of the steps to be taken in finishing our work, and the most important chemical of all—water—costs practically nothing. If, therefore, the prints of to-day prove fugitive, the blame rests neither on the manufacturer nor the process, but on the man who does not understand his materials, or who is careless in his work, and especially as to the composition and condition of his mountant.

NEWS AND NOTES.

War Pictures.—In reply to the circular sent out by the war office asking for negatives or prints of war scenes, there have been received over 500 negatives and 300 prints of Porto Rican subjects, over 700 negatives and nearly 400 prints of Cuban and reserve camp-subjects, and nearly 150 negatives of Philippine subjects, from which something like 350 Porto Rican, nearly 500 Cuban and a few Philippine subjects have been chosen to make the final selection for an album, and these negatives and prints were then returned to their owners. There are still on hand

from which to make further selections over 200 Porto Rican negatives, 350 negatives and nearly 700 prints of Cuban and reserve camp-subjects, and over 600 Philippine prints.

The work so far has been to make selections from the negatives and prints sent in, which are usually very small. The ones selected are then enlarged to eleven by fourteen inches. After having been collected and enlarged, it is the intention to retouch these enlargements, and then make negatives from them for the purpose of making the final pictures. This is necessary on account of the small size of the negatives and prints received, and on account of the poor quality of most of them, as they had been taken under disadvantageous circumstances, often by persons inexperienced in the handling of their cameras. After as much material as can be obtained has been gotten together, the final compilation will be made. This work is regarded of importance, having already served to determine disputed questions. It is thought that in time the collection will be of such value as to induce Congress to publish it for distribution to libraries throughout the country.

Negative Marking Ink.—The *Photographische Chronik* publishes the following for putting titles on negatives:

1

Water	120 c.cm.
Sugar	30 grammes.
Glycerine	10 c.cm.

2

Alcohol	120 c.cm.
Nitrate of mercury . .	20 grammes.
Chloride of mercury .	10 grammes.

The two solutions are mixed, and the title written on a piece of paper. When the writing is dry, it is transferred to the film of the negative by rubbing the back of the paper with a paper-knife or the finger-nail.

Composite Pictures.—During the past month we have received three inquiries for a good method of making combination pictures. We give here the simplest way, its only drawback being the necessity of having all the subjects which are to form the composite ready to be photographed at one time. It is the method practised and described by Geo. G Rockwood: "My method for securing a picture was to so reduce the power of the light as to made necessary an exposure of eighteen seconds. As there were nine sitters, the *pro rata* exposure was two seconds. Of course, it required great care to superimpose exactly one image upon another. It was accomplished as follows: I first drew upon the ground glass a fine perpendicular pencil line, which served as a central line to the head. Across and at right angles to this line I drew two others, an inch and a quarter apart, one of which ran through the line of the mouth and the other through the eye at the caruncula, or at the joining of the upper and lower cartilages. These lines were arbitrary, and the image was adjusted to them. Of course, there is quite a variation in the distances between these two lines in the human head; therefore the camera had to be carefully adjusted after each exposure. As it was very difficult to do this by hand, I constructed adjustable boards hinged at one end, with fine screws so placed under the camera as to elevate or depress it, and another screw to move the camera and bedplate forward or backward, until these distances between the eyes and mouth were made to correspond with the standard. I then made a pendulum by a weight on the end of a string, about forty inches long, practically giving one second to a motion or oscillation. This I found more practicable than a watch. Starting my pendulum, the impressions were made in quick succession. Of course, the slide was returned to the holder after each exposure, and a new focus or adjustment of the succeeding sitter made. The only modification to the final picture consisted in uniting the white collars or neckwear into one. I think it would be best in future experiments to have a dark or black silk kerchief with which to cover the white neck draping, which would give a simple uniform effect to the body."

STUDY the work of others. Some photographers are so conceited that they cannot see the good qualities in the work of others, and are therefore unable to see the bad qualities in their own productions.

BERTHA GALLAND AND "NICKY"

Copyright 1900 by B. J. Falk, N. Y.

PORTRAIT

Copyright 1898 by B. J. Falk, N. Y.

THE NEW FALK STUDIO, N. Y.

OFFICE OF FALK STUDIO: MAIN FLOOR OF HOTEL.

It is difficult to describe the new Falk studio without seeming to give way to an unreasonable excess of superlatives. It is essentially a place to be seen, rather than to be described in black and white, its setting and color schemes playing an important part in the impressions left by a personal visit. These things cannot be conveyed by type, or, indeed, in any other way than by the combination of light and color—such as we see at lantern exhibitions or in Ives's *Kromskop*. For this reason we would urge our readers to embrace the earliest opportunity of seeing the studio for themselves, with its many beauties of color and design.

The Hotel Waldorf-Astoria, on Fifth Avenue, wherein the studio is located, justly ranks among the show places of our country. It is a world in itself, with over fifteen hundred rooms, and a population (changing almost daily) exceeding that of many a good sized town. The exterior view is magnificent, a huge pile of red stone rising over two hundred feet in the air, neither too plain nor too elaborate in its architecture, varied in design, and capped by many turrets, which give it lightness and grace. Within its walls one beautiful scene blends with another, halls and stairways lined with marbles and delighting the eye with well-calculated lines and masses, music galleries, public rooms and similar appointments. The scene at night, when the main floor overflows with wealth and fashion, is bewilderingly interesting and beautiful—kaleidoscopic in its ever-changing schemes of design and coloring—like a cluster of jewels with its restless brilliancy and animation.

The Falk studio occupies a large part of the fifteenth floor of the hotel, and its windows look out over the metropolis—north, west and south—at a height of almost two hundred feet. Entering the hotel from the Thirty-third Street entrance, one passes almost immediately into the Red Room on the main floor. This is a spacious room, about 40 by 50 feet, furnished in dark red and walnut. Here we find the public office of the studio, shown in one of our engravings.

DETAIL OF STAIRWAY.

STATUE BY MORETTI.

AN ALCOVE.

RECEPTION-ROOM.

Mr. Luke Powers has charge of this department, where specimens may be seen and appointments made for sittings. From the office we go through the central hallway of the hotel, and taking one of the many elevators are comfortably taken to the fifteenth floor, formerly occupied by what was known as the winter garden. Here, through huge glass doors, we get our first glimpse of the reception-room of

RECEPTION-ROOM A MONTH BEFORE COMPLETION.

VIEW SHOWING FULL LENGTH OF RECEPTION-ROOM.

the studio seen in the engraving given above. Irresistibly the mind recalls pictures of the palace of Versailles as it was in the time of Louis XIV. It is indeed a glorious room, 70 feet in length and 40 feet wide, lighted by three stained glass panels let into the ceiling, and at night by 152 incandescent electric globes arranged for decorative effect. Near the door is a desk where the books of the establishment

are kept, then two massive pillars, on which two bronze figures are seen support-

TURKISH ROOM.

ing the roof. The walls are oak panelled, with Pompeiian red tapestries and chastely decorated panels above running lengthwise. At the further end of the room is a marble stairway leading to the waiting and dressing-rooms, operating-rooms, etc. At the head of this stairway is seen the statue, designed and modelled by Moretti, shown in the engraving on page 162. On the north side of the stairway is a large alcove, shown in a separate engraving, and a detail view of the stairway is also given. From this alcove one enters the octagon room, used for the display of miniatures and similar examples of fine portraiture. This little room is elegantly appointed to harmonize with its purpose, and its deeply recessed windows frame several delightful views of the northern part of the city. At the other end of the reception-room is another similar room, wherein choice specimens of framing are displayed within an ingeniously contrived cabinet, which contains a wonderfully complete assortment of styles, and yet occupies a minimum of floor space. From this room one may look out over the city toward the East River, with its shipping, and the green shores of Long Island stretching out in the distance.

Returning to the reception-room, a doorway on the left, near the Jefferson mantel seen in the engraving on page 162, leads us into the greenroom, a dressing-room for patrons with baggage for changes of costume. The room is tastefully draped in light green and furnished with green oak throughout. The floors throughout the studio are of marble mosaic, simple but tasteful in design, and refreshingly cool in color to the eye. Behind the stairway are various workrooms for carbon printing, finishing, etc., abundantly lighted and equipped for practical work.

Ascending the stairway, we pause to admire Moretti's figure, and then pass into the Pompeiian waiting-room, which extends behind the statue. From here we reach a passage, off which we enter the Dutch room, a waiting-room for men, restfully furnished in red and black. Next following are the Yellow Room, and the Rose Room, two daintily appointed dressing-rooms for women. The furnishings

ROSE ROOM.

of these rooms have been specially designed for their place and use, and the

draperies are of soft silk, which give the rooms an exceedingly tasteful and inviting appearance. Near at hand is the entrance to the operating-room. This, of course, is the workroom of the establishment, and is much like other studios of the better sort. Our engraving shows only one corner. The room covers some 30 by 40 feet, the skylight extending about 17 feet at an angle of 33°, commencing about 7 feet from the floor and being 15 feet wide. The light is due north. At the south side of the room are spacious recesses, wherein are stored backgrounds and accessories. These are screened from view by curtains of velour. Running from the operating-room is a passage-way with a swing frame of ground glass very much like a door. At the far end of the passage is the enlarging-room, and the combination is made to serve an interesting purpose. When it is desired to show a patron how this or that picture would appear as an enlargement, the negative is inserted in the enlarging lantern in the enlarging-room and the enlarged picture is projected before the patron upon the ground-glass frame mentioned. Thus the sitter may see an enlargement of his or her portrait (in the rough) at the time of sitting. From one end of the operating-room a doorway leads into the developing- and printing-rooms; at the other end a circular stairway leads down to the greenroom below the studio.

A CORNER IN THE OPERATING-ROOM.

With this ends our sight-seeing, as far as the public rooms are concerned. The various workrooms, negative storerooms, etc., apart from their convenience of appointment, do not need detailed description. The carbon printing-rooms, three in number, are specially reserved for this work, and are so fitted with conveniences as to enable the printer to overcome the difficulties attendant on carbon printing in the constantly changing atmospheric conditions which bother Eastern photographers.

MR. FALK'S PRIVATE OFFICE.

Perhaps the most wonderful room is that yet to be described, which has been reserved by Mr. Falk for his own use. It is reached by a passage turning off to the left at the foot of the stairway in the reception-room. The room is about 16 by 20 feet, and not more than ten feet high; the walls are hung with sage green fabric and the woodwork is dark Flemish oak, a rich and altogether pleasing combination. Around the wall, about 2 feet

from the ceiling, runs a shelf holding choice examples of pottery, Delft, etc., and here and there are cabinets for papers, prints and the like. Against one wall, on a pedestal, stands the antique bronze "Ophelia," presented to Mr. Falk at the opening of the studio by Messrs. G. Cramer, J. C. Strauss, S. L. Stein and Pirie MacDonald. The figure stands about 22 inches high and holds a spray with several small electric globes. The engraving, given on this page, shows the effect produced by this illumination of the figure. At the other end of the room is a mysterious alcove, evidently designed to hold some special treasure, but Mr. Falk refused to disclose its purpose. To our mind, it seemed peculiarly adapted for the storage of reserve stocks of certain well-known "developers" *not* obtainable from all dealers in photographic supplies. The great feature of the room, however, is its magnificent outlook. The south side of the room is, as our engraving shows, occupied by windows, looking from which one sees spread out before the eye a glorious panorama—the city, with North and East Rivers on each side flowing like silver ribbons to the sea, Brooklyn Bridge stretched like a spider's web across the East River, and at the other side New York Bay right over to Staten Island, about six miles or more distant, with the Statue of Liberty and the long stretch of Jersey shore—now in sunlight, now in shadow, and now again wrapped in mystery. The constantly changing pictures seen from this window are marvellously interesting. When the mystery of darkness falls over it, and the great city lights up the night with its thousands of lights, the beauty of the scene is indescribable.

Mr. Falk has done a remarkable thing in the making of this gallery of photographic art. He deserves all possible success for the enterprise which conceived the idea, and for the great faith in his art which enabled him to successfully carry through his plan. And we are perfectly sure that the fraternity will agree with us that he is the one man in America best fitted to make so great an undertaking yield the success it deserves.

OUR PICTURES.

BRONZE "OPHELIA," PRESENTED TO MR. B. J. FALK.

In order to properly present to the fraternity the remarkable undertaking embodied in the new Falk Studio, New York, we have wholly devoted our illustrations in this issue to picturing the studio and its work. For the pictures and the material for our notice of the studio, as well as for the negative used in printing our frontispiece, we are indebted to Mr. B. J. Falk. We know that our readers everywhere will find much that is interesting, as well as useful, in these illustrations, and leave them to tell their own stories. The engraving accompanying this note, presenting substantial evidence of the esteem in which Mr. Falk is held by his fellow workers, is referred to in our notice of the studio.

The prints which supply the frontispiece in this, as in past issues, are upon Velox Paper (in this instance *Special Portrait Velox*). They show that, with intelligent handling, these splendid papers are adapted even for the highest class of portraiture, giving beautiful and artistic effects. We are glad to see that the prints on Velox given in the Magazine during the past year or two have led many professional workers to appreciate this paper on its merits.

PORTRAIT.
By B. J. Falk, New York.

PAPERS FOR PROFESSIONAL PHOTOGRAPHERS.

BY JOHN A. TENNANT.

LI. LINES.

I AM glad to see so many photographers asking for more information about *lines* and their influence in the portrait. It is a big subject for a single paper, and one peculiarly difficult to handle without illustrations, which I have not time to prepare. But we may learn much with a few illustrations made as we go along, and by referring to the portraits easily accessible in books and magazines. A pad of paper and a soft lead-pencil will be useful.

Let us first recall a few facts about lines in general—elementary facts with which we are all familiar, but which photographers persistently ignore or forget in their daily work under the skylight. We know that different lines (or forms) awaken different sensations in the mind. Thus the perpendicular line conveys the idea of stability and support; horizontal lines express repose, rest; lines inclined at angles seem to speak of action, unrest, and so forth. Converging lines draw attention to the place where they meet; lines diverging lead the eye away from the point of divergence. Lines repeated in the same direction give emphasis; if oft repeated and approximately parallel they convey a sense of sameness and monotomy. Fine lines express delicacy; broad lines give boldness of effect. The length of a line, or the sweep of a curve, regardless of its direction, makes its effect more forcible. Variation of direction in lines, straight or curved, gives variety. The curved line affords the eye a greater degree of pleasure than a straight or angular line; the circle and oval are more interesting than the outlines of a square. Lines enclosed within a space

acquire a certain proportion according to the dimensions or shape of the space enclosing them. Thus every alteration in the shape of the picture space (as reducing or increasing the amount of space about the figure) will give every line in the composition a new significance—a new power for good or evil.

All these things are very elementary. They form, so to speak, the A-B-C of the language of line. All photographers learned this alphabet as children; they use this knowledge whenever they look at anything which has form or shape or proportion. Why do they not use it in making portraits? Simply because they do not appreciate the significance of the line; it is too simple, too elementary for the mind accustomed to wrestling with Rococo combination accessions and six-change posing chairs.

In every portrait we have three sets of lines. First: The line bounding the print and enclosing the picture. This fixes the shape of the picture space and must, of necessity, have much to do with our interest or pleasure in what is depicted within that space, inasmuch as the eye is keenly sensitive to the value of the spaces between the figure at the bounding lines. Next we have the outlines or contour of the figure or part of the figure portrayed. These may have interest of themselves, and yet this interest may be lost by disproportion existing between these contour lines and boundaries of the picture space. And, finally, we have the interior lines of the figure, formed by the draperies, arms, legs, direction of the head, etc. The lines of the accessories used sometimes mingle with the lines of the figure; at other times they form part of the general outline of the composition within the picture space. Every line tells its own story—whether we will it or not—and has a definite influence upon our pleasure or interest in the portrait. Hence, every line needs the most careful consideration to make it convey the right idea, or to make it help in conveying a pleasing and correct characterization of the personality of the subject.

By this time the wise photographer will have reached his first conclusion—viz.: that the simpler the lines are in a portrait the greater the chances are that it will be a successful portrait. Hence, if he is really wise, he will begin to school himself to make portraits with the fewest possible lines, and to see that the lines employed shall add to the interest or attractiveness of his subject. How shall we go about this reformation? First, by leaving out, or subduing in tone, all lines not essential to the portrayal of the subject. Let us take a portrait shown me with pride by a Southern photographer a few days ago. It was an 11 x 14 platinotype print, showing a full figure of a beautiful girl in the regulation graduation gown. A more charming subject could not have been desired: an oval face crowned with an abundance of dark hair, a well-formed head and bust, well-rounded arms, admirably proportioned figure—a fine specimen, in fact, of Southern womanhood at its best. There were infinite possibilities of beautiful lines *in the subject.* What did that photographer of thirty years' experience do? He brought the figure down to 9 inches, leaving 3½ inches above the head and 1½ inches of space below. The figure occupied the centre of the picture space. An elaborate ground with a massive pillar and floriated border dwarfed the figure and made it appear dumpy. A painfully painted lattice window let in sharply defined rays of painted light upon a long curly-legged table supporting a bunch of paper roses in a 49-cent vase. Under the table lay a book, and a befrilled silk cushion connected table and subject. At the other side of the figure was placed a ponderous carved arm-chair with a high back, catching the light and diverting interest from the figure. The print was trimmed as full as the negative would allow. What shall we say of such a photographer? He bears an honored name, and I am sure that in making that picture he honestly did his best.

I pointed out the things here mentioned. He replied: "But that's a —— ground, and cost me $—. So-and-So has one in his gallery. I am sure that chair is all right, and I don't see what fault you can find with the table. I don't like these empty pictures, anyway." This is the sort of thing which makes the critic say sorrowfully, as Mr. Keiley said in *Photograms of 1899:* "So far as professional photographers are concerned there seems little chance of any change for the better among them." If the photographer had known *anything* about line his interest in the possibilities in his subject would have pre-

vented him from spoiling its beauties by the introduction of a mass of unnecessary lines, as uninteresting as they were unnecessary. What should he have done with such a subject? Given it a ground of light-gray, diffused the illumination softly about the figure so as to let the texture of the draperies in light and shadow reveal its beauties quietly, gone around the figure to discover the most pleasing lines, given the hands occupation to heighten the illusion of life, securing a predominant and happy curve running through the figure, and trimmed the picture space so that it formed a proper setting to the beauties it contained. Elaborate accessories were unnecessary in such a case. Every line outside of those formed by the figure was a temptation to failure. Do not mistake my meaning here. Accessories have their usefulness. The severity of absolute simplicity is not appropriate to every

PORTRAIT.
By B. J. Falk, New York.

subject. But use them aright—to make, not to mar the portrait. If you have an old man, whose face and form express physical and intellectual vigor, put him in the chair with bold lines and give him a newspaper. The accessories, or the lines they give, will help in the expression of the characteristics of the subject. If the subject is a child, seat her on a cushion and give her a doll or book, and make the lines help to give the portrait interest; but don't seat the child at a glossy, curly-legged table, and present her to futurity with an atrocious wicker-chair growing out of her shoulders. In other words, apply in your portrait-making the few simple facts about lines given in the second paragraph of this paper. The man who appreciates all that the paragraph tells him will see a notable improvement in his work—if he uses his knowledge. His work will be free from displeasing angles; his vign-

PORTRAIT.
By B. J. Falk, New York.

ettes will not be made coarse and heavy by the introduction of broad lines; his old men and women will not seem to be hopelessly fixed in ungainly positions, caused by the introduction of long horizontal lines running from the figure to the bounding lines of the picture space. His women will present less bluntly rounded corners and more flowing curves. Contrast the two prints facing pages 48 and 150 in *Mosaics*, 1899; the two facing 153 and 187 in the same volume; that facing 184 in the 1899 volume with that facing 144 in the volume for 1900; that on page 115 in the 1900 volume with that facing page 187 in the 1899 volume. Study the cleverness of the lines, their grace and flexibility, in the pictures on pages 152, 72, 282, and 81 in *Mosaics*, 1899. In this way you may learn something of the meaning of lines, and how they help or destroy the quality of a portrait. This appreciation of beauty in lines must be cultivated. It grows by association with beautiful forms.

Then there is what is sometimes spoken of as the "line of beauty"—the serpentine line—which the ancients regarded as the key to all excellence in form. If you erect this line of beauty inside a triangle you get a very pleasing skeleton form for the pose of a standing figure. Run a serpentine line in easy curves through the centre of the frontispiece of *Mosaics*, 1900, and then treat the picture facing page 81 similarly. The agreement or lack of agreement of the principal direction of the lines in the two pictures with the serpentine line will tell you why you have more pleasure in looking at one than at the other. If you have a collection of prints from paintings, such as every photographer should accumulate, look through the portraits of women and children. Everywhere you will find this wonderful serpentine line, and wherever you find it you will find grace.

A NEW COPYRIGHT BILL.

As many of our readers doubtless know, recent judicial decisions affecting copyright, notably the case of Boller *vs.* "Outing," have plainly demonstrated that the present copyright law is defective. Not only does it fail to adequately protect the photographer's rights in his own work, but it also affords several loopholes whereby infringers of the law may escape the consequences of their piracy. With a view to the correction of these defects by legislation, the Photographers' Copyright League of America met a few days ago and discussed the changes required to render the existing law more equitable. The outcome of this meeting was the framing of a new bill, herewith reprinted from the official copy. Apart from a few minor changes in the wording, this bill differs from that proposed a year or more ago (page 290 of our 1898 volume), in that it provides a penalty for copies of a photograph sold by the infringer or his agents, as well as those which may be found in his possession. The justice of this amendment needs no argument. In the case of an infringement of copyright by a weekly newspaper, for instance, the infringement is rarely known to the photographer until the paper is published and scattered broadcast, after which, of course, comparatively few copies of the paper may be found in possession of the publisher or his agents. The clause in the existing law which gives half the penalties recovered to the government is also deleted in this amended bill. Inasmuch as the government affords the photographer no help or service of any kind in the protection of his rights, it is obviously unfair that the government should claim any share of the penalties recovered by the photographer for the infringement of his rights—penalties recovered at considerable personal cost and labor on the part of the photographer.

A BILL to amend section forty-nine hundred and sixty-five, chapter three, title sixty, of the Revised Statutes of the United States, relating to copyrights.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: That section forty-nine hundred and sixty-five, chapter three, title sixty, of the Revised Statutes be, and the same is hereby amended so as to read as follows:

"Sec. 4965. If any person, after the recording of the title of any map, chart, dramatic or musical composition, print, cut, engraving, or photograph, or chromo,

or of the description of any painting, drawing, statue, statuary, or model or design intended to be perfected and executed as a work of the fine arts, as provided by this act, shall, within the term limited, contrary to the provisions of this act, and without the consent of the proprietor of the copyright first obtained in writing, signed in the presence of two or more witnesses, engrave, etch, work, copy, print, publish, cause to be published, dramatize, translate, or import, either in whole or in part, or by varying the main design with intent to evade the law, or, knowing the same to be so printed, published, dramatized, translated, or imported, shall sell or expose to sale any copy of such map or other article, as aforesaid, he shall forfeit to the proprietor all the plates on which the same shall be copied, and every sheet thereof, either copied or printed, and shall further forfeit one dollar for every copy of the same by him sold or exposed for sale, or in his possession, either printing, printed, copied, published, or imported, and in case of a painting, statue, or statuary, he shall forfeit ten dollars for every copy of the same in his possession or by him sold or exposed for sale: *Provided, however,* That in case of any such infringement of the copyright of a photograph made from any object not a work of fine arts, the sum to be recovered in any action brought under the provisions of this section shall be not less than one hundred dollars nor more than five thousand dollars: *And provided further,* That in case of any such infringement of the copyright of a painting, drawing, statue, engraving, etching, print, or model or design for a work of the fine arts, or of a photograph of a work of the fine arts, the sum to be recovered in any action brought through the provisions of this section shall not be less than two hundred and fifty dollars, and not more than ten thousand dollars."

This bill is known as H. R. 9494, and was introduced in the House of Representatives, at Washington, March 12th, by Mr. Bull. It was referred to the Committee on Patents and ordered to be printed. Photographers can help its passage by writing to their Congressional and Senatorial representatives urging their support of it.

Another effective way in which to help forward the good work which the League is doing for the protection of the rights of the craft is to become a member of the League. Every photographer should see that his name is duly enrolled on the League's membership. Send your request to be admitted as a member of the League to the Secretary, Mr. Chas. E. Bolles, 244 Fulton St., Brooklyn, N. Y.

LETTERS TO JACK—AND THINGS OLD AND NEW.

IV.

My Dear Jack: Your last letter to me makes me feel pretty badly—as if I had done wrong in publishing the discussion begun on the first page of our February and continued in the March number upon "*Old vs. New Methods in Portraiture.*" You say that "the diversity of opinion there expressed breaks me all up and quite puts me at sea to decide which is the best way for me (a youngster) to follow." I am sorry that you are so perturbed; but maybe we can set you right before the "discussion" is ended. As for me, I am glad to see the interest taken by so many good photographers, and I wish more of our most famous workers would take part. You remember what the pig said to the wind when it hustled up his bristles a little too coldly, viz.: "Never mind, you old blower. I have always noticed that the more the wind howls the more the acorns come down." "Then," says the fable, "for once the pig looked up and gave a grateful grunt." Let us hope this discussion will result in *much* good to photography. You will agree, Jack, that all of us make mistakes *sometimes*. Indeed, some wise philosophers have been so honest as to confess that they have gone still further and "made asses" of themselves. For example, there was that old-time German-Swiss philosopher and chemist, Paracelsus, who wasted life in trying to discover its elixir, which, after all, turned out to be alcohol; and instead of being made immortal upon earth, he died drunk on the floor of a tavern. Moreover, Hoffman (August Heinrich), a German historian, said on a page of his own autobiography, "On the eleventh of March at half-past eight o'clock precisely I was an ass." So

do not be too hard upon yourself or upon me, for, as another has said, "The like happens to many of us. We waste our best years in distilling potions which, after all, do not immortalize us, but only intoxicate us. By heavens! we are all of us mad." Do not think this is the case with all who take part in the discussion which has "alarmed" you, however. I share your "wonder at what Mr. Estabrooke wrote about the old masters," viz., "who are only masters because, considering the times in which they lived and their limited facilities, they accomplished wonderful things for their age." I am very sure that Mr. Estabrooke might change his mind as to this if he could unfold it for a little while among the *acres* of the works of the "old masters" in the Vatican or at Florence or Venice or Dresden. Knowing him as I do, I believe if he could stand in any such presence he would feel like a child gazing at the stars. He would feel how many years of study are in the great picture before him; having taken some of the first steps toward perfection himself, he would recall the hours when that broad canvas was first stretched upon its frame, when, perhaps, Raphael stood before it, and laid the first lines and color upon it and beheld the figures one by one form into life; then, looking upon the work of his own camera, he would wonder that he could ever have succeeded so well as he has—*maybe* he would *recall* his misleading blast at the "old masters."

I have already counselled you to form a good opinion of your own work, but to make your results *worthy of it*, and not to become conceited.

Albrecht Durer, that dear old artist who taught us perspective in engraving, once said (sarcastically or otherwise, it don't matter; it looks to me like a fling at the big-headed ones), "God sometimes granteth it unto a man to learn and to know how to make a thing the like whereof in his day no other can contrive; and perhaps for a long time none hath been before him, and after him another cometh not soon."

Take this to heart, gather to yourself all you see and hear that is good, but do not allow yourself to be found looking to any one person or class of workers for your entire inspiration. Raphael was a great painter. We all know that. Nevertheless, his biographers tell us that he painted in three great styles: *Peruginesque*, *Florentine* and *Roman*. We call them all "old" now. Raphael grew too anxious, worried, and died early, alas!

You ask me to "define exactly what I understand by following nature?" You quote from Mr. Estabrooke again where he says: "Nature, then, is the teacher which we must all go to for instruction in art matters. Man's taste becomes vitiated, but nature's ever remains true to the model set by the greatest artist of them all—the Creator."

Let me suggest to you in the beginning that some photographs before me (I need not go further back than now) convince me that the minds of some who work *after* "nature" have become very much "vitiated" in their ideas of the great Teacher, as well as in their taste. For instance, the photographer who poses a nude or mostly nude person before his camera in an unnatural position, and thinks that with a symbol of some god, goddess, functionary, worship or what else placed in the hands of the said nudity, he shows "great imagination," "artistic skill," only makes an excuse for a "freak" position, claims a wise following of nature, and, I believe, has acquired a "vitiated mind." He commits a wrong against his art, to do which is unnecessary, inexcusable and corrupting. Art and nature are never discordant, but work harmoniously together. "Art preexists in nature, and nature is reproduced in art," not corrupted by art.

"As vapors from the ocean, floating landward and dissolved in rain, are carried back in rivers to the ocean, so thoughts and the semblances of things that fall upon the soul of man in showers flow out again in living streams of Art, and lose themselves on the great ocean, which is Nature."[1] Then, is it not true that when we examine a fine painting we look for the following of nature in the *nobility of the subject* chosen—fine composition, correct drawing, true perspective, grace and naturalness if a human figure, with beauty and gentleness of expression, and careful arrangement of the light and shade? If we do not find these in our productions, or if they are shadowed by obscene suggestion

[1] Paul Fleming, in Hyperion.

or the reverse of the qualities mentioned, then they are not works of art, be they "after" the "old" or the "new."

Do you *straighten* any, Jack? I am glad to see you give thought to the subject, and now I will turn to some of the other questions you ask. The first one is a true conundrum. You say "photography has undoubtedly been a great help to all of the kindred arts and has gained some great achievements. Of these what is considered the most useful to man and helpful to art?"

Now, Jack, let me warn you. In the good old days a traveller stopping at a Dutch hotel was charged according to the amount of *noise* he made. I suppose when he drank much Holland gin he spent much money and made much noise, and that is where the charge came in. May we not all take a hint? You ask me "to point out the *noblest* work photography has done." I believe it is generally conceded that one of the greatest helps that photography has given to man has been in the line of reproducing the monuments and other records of the past, thus adding to our information concerning our ancestry. There is no end to what has been done in this way. One of the earliest and one of the "noblest" uses of the camera applied to the monuments of the past is the reproduction of the Jewish symbols found upon the walls of the great piers of the *Arch of Titus*[1] in Rome. On one of the walls are bass-reliefs of groups of soldiers bearing their booty from Jerusalem, among which we discover the seven-branched golden candlestick, the table for shewbread, the cups for frankincense and the silver trumpets made after the patterns which Moses was commanded to place in the Tabernacle. I only consider these now because they are among the oldest subjects which photography has grappled with. They have been reproduced in immense size by some Italian photographers.

Now, coming back to "regular work" again, you ask, "What is *Asser's Process?*" Mr. Asser's process is one of the many proposed during the early search for a perfect and reliable method for the production of type-blocks from half-tone negatives; but, as we all know, it did not get much favor. It is simple, and if you are working in that line you can easily try it. It is a transfer process in which starch takes the place of the gelatine usually employed. Paper is covered with a thin film of starch or of flour paste, spread on with a brush, and is then immersed in a weak solution of bichromate of potash. After exposure the paper is soaked in cold water to remove the unaltered bichromate; it is then dried and ironed with a hot iron, in order to harden the coating. After this it is inked and the ink washed off the unaltered parts in the ordinary way. The picture can then be transferred to zinc for etching. You will find it of little use for half-tone work, but fairly good for pen drawings.

Finally, you ask me to suggest some "new fruit" for your camera. In our February number, page 78, I made some suggestions, "*How to Make the Idle Camera Pay*," to which I refer you, and add here an engraving of a picture full of suggestion, if not to be highly recommended. I forget who sent me the original, but if the party will send me his name I will give him credit for his work.

This picture will serve one good purpose anyway, *i.e.*, enable me to close this, by

[1] The Dewey Arch was modelled, in general, after the Arch of Titus, but in the details of decoration it is, of course, very different.

saying that your letter offers much "new fruit" for thought and has kept me busy for several good hours. I must stop here and consider it further. Consequently, I am yours, greatly obliged,

EDWARD L. WILSON.

NEWS AND NOTES.

THE Royal Photographic Society of London has opened a "one-man show" of Mr. J. Craig Annan's works. In an address at the opening of this exhibition Mr. Annan explained his unwillingness to enter into public discussion of things artistic. Discussion, if it develops into argument, as it usually does, is entirely futile. If a picture has any real merit as an æsthetic work it should touch a sympathetic chord in the intelligence of the observer, and give him pleasure. If it does so it has fulfilled its mission so far as he is concerned; if it does not, no amount of argument will enable him to realize and enjoy the artistic intention of the producer, for the aim of a picture is not to demonstrate any theory or fact, but is to excite a certain sensory pleasure. Mr. Annan differentiated between useless discussion and the sympathetic exchange of ideas, without which no man could develop. To the man who strove after a class of picture because he felt it was the right thing to do, or because he admired it, but did not *understand* it, fashions in art were due. Through these fashions, art—or the worker—suffers, for the individuality is lost in imitation. Art cannot be taught unless the germ of art-instinct is already there, but if the instinct *is* there the student may be guided, helped in or past many difficulties, through the experience of others, and finally produce artistic work.

"Glassoline" is the name of a new film which will be put on the English market as soon as the owner can form a $100,000 company. As soon as this company shows what it can do it intends to form itself into a $500,000 company. Glassoline is a film of pure gelatine coated with the sensitive emulsion, and backed with a sheet of transparent paper. This paper can easily be moved after the plate is fixed and dried. The paper backing is waterproof, and this will prevent the film from stretching or buckling, or being in any way a nuisance. Briefly, according to the prospectus, the new film will be perfect. There have been films made for many years, but except one of American make, and of world-wide fame, they have none of them successfully challenged glass. We shall look for further information on glassoline with as much interest as we are awaiting news of "Secco."

Mrs. Cameron used to tell of her first meeting with Longfellow: "One morning she was seated at breakfast, when there came to her her friend and nurse, with the information that Mr. Tennyson and a strange gentleman were at the door and wanted to speak to her. She hurried out, to find Tennyson and Longfellow awaiting her coming. 'I have brought you a great man, who will let you immortalize him,' growled the poet. 'This is Longfellow; you know him by name, now you know him in the flesh. I will leave you now. Longfellow, you'll have to do whatever she tells you. I'll come back soon and see what is left of you.'"

Developer Test.—A crude method of discovering the kind of agent employed in developers is given by Dr. Schann, of Germany. If on the addition of a few drops of acetate of copper the developer takes a yellow color, it contains hydroquinone, and if blue-green, it holds eikonogen. No change occurs in the color if hydroxilamine be used, while in the case of pyrogallic acid a deposit is formed.

Dishes or pans of metal are sometimes handy for photographic use, but if the metal is not coated in some way it may have an injurious effect on the liquids. A good coating may be used by those who do not object to do a thing thoroughly and who are willing to take time. First coat the metal with good boiled oil; secondly, put on a thick even coat of best asphalt varnish paint. Then let it dry for several weeks and finally coat it with graphite paint, without the use of turpentine or any other dryer.

THE STRAUSS STUDIO, AFTER THE FIRE.

By the courtesy of Mr. B. J. Falk, who loaned us the two prints here reproduced, we are able to give our readers a clear idea of the terrible havoc which resulted from the recent fire at the Strauss gallery, St. Louis, reported in our last issue.

RECEPTION-ROOM—AFTER THE FIRE.

Those who can refer to pages 355 and 357 of our 1898 volume will be able to compare the ruins seen in our engravings with the beautiful reception-room and studio as they appeared at the opening of the gallery in 1898. The reception-room was furnished throughout in quartered oak, and the stairway led to a balcony, on the walls of which were displayed hundreds of autograph portraits of famous St. Louisans—a collection which will be, indeed, difficult to replace. The room was lighted by windows of stained glass, and around the walls ran a mural frieze setting forth the fine arts in allegory, painted by Paul Carnoyer. The general effect was extremely rich and pleasing to the educated eye.

The studio or operating-room was a spacious place, hung with dark-red velour and furnished with every help required for work of the best sort. The ceiling was semicircular in form, with an unusually large skylight, giving abundance of illumination for photographic purposes.

Mr. Strauss has had an eventful experience in professional photography. He began his career as a boy of twelve in a tin-type gallery at Cleveland. Afterward he worked in St. Louis, migrating to Chicago in 1876, and returning to St. Louis a year later. Here, in 1880, he started a business with Mr. Ed. Guerin as partner, and the first day's receipts amounted to 25 cents. After a few weeks Guerin retired, and since that time Mr. Strauss has worked alone, winning success against many of the cleverest workers in the profession, such as Scholten, Fox, Seed, Cramer, Benecke and others of equal repute.

We have not heard of Mr. Strauss' intentions concerning the rebuilding of the gallery, but presume that he will reconstruct the place in a manner surpassing the studio unfortunately destroyed.

OPERATING-ROOM—AFTER THE FIRE.

HOW PHOTOGRAPHY HELPS.

At a recent meeting of the Photographic Branch of the Franklin Institute, Philadelphia, the topic, "Photographic Record Work," was announced for discussion by the chairman, Dr. Hy. Leffmann. Among the interesting talks which followed, Professor Himes (of Dickinson College) said:

The possibilities of photography as an art preservative were fully realized at the first announcement of its discovery. It promised to supplement the printed page in a way that the most skilful and conscientious artist could never hope to do. The authorities of the Congressional Library at Washington doubtless had this in mind when they very appropriately associated the names of Guttenberg and Daguerre near each other in the salon of inventors, a fact, by the way, that seems to have escaped the notice of many at the recent meeting of the Photographers' Association of America, where, after an animated, almost indignant, discussion, resolutions were passed and a committee appointed with power to correct the supposed omission of recognition of the inventor of photography.

Whatever may be thought of the adaptation of photography to artistic expression, it is just that that unfits it most for art, that gives it its high value for observation and record work. The artist or the draughtsman can employ a sort of rhetoric of art, a way of putting things, to accentuate what he wishes, and with a purpose in view. He can close his eyes to the undesirable or disagreeable, but as a record his work is always necessarily incomplete; for at his best he does not and cannot give all that he sees, and what he does give is always colored by personal bias and interpretation. The camera, on the other hand, without sense of beauty or even sense of propriety, with no point to make, no preference to emphasize, with inability to reject any more than to select, is necessarily mathematically, even painfully, accurate into the minutest details, giving a complete record with the unerring precision of a machine. The importance for record of facts of this degree of completeness, so annoying to the artist, is apparent upon reflection, that as no condition in a phenomenon or experiment may be regarded as trifling, hardly even relatively so, so for the purpose of record there is no detail in the pictorial representation of a fact, however minute, that can safely be treated as trivial or incidental. What may be misinterpreted or entirely overlooked to-day may to-morrow assume the highest importance, even prove to be the germ of a new branch of science. Great discoveries often spring from such incidental facts. How many inexplicable defects on photographic plates that were supposed to have been carefully shielded in the neighborhood of Crookes tubes turned out, in the after-light of Roentgen rays, to have been unrecognized pointers to that discovery.

While the characteristics of photography alluded to were recognized at the very beginning, complete realization of expectations based upon them necessarily awaited fuller development of the art; but its progress, in very recent years, has been so rapid, in all that fits it for record purposes, that unless we reflect we can hardly appreciate its present resources in this respect and the widened range of possible subjects. To note briefly some of these points of advance:

1. The time required or permitted by it to make an observation and record it, for it does both, formerly within very narrow limits, to-day lies between extremes almost infinitely separated. It can record the phenomenon that lasts but an instant, which the eye cannot recognize, and, on the other hand, since the perfecting of the dry plate, it can look and look, not only with unwearying retina, but with cumulative effect, by the hour, if necessary, bringing into range of observation and record facts luminously too faint ever to come within the range of direct vision.

2. Color has ceased to be a matter of much concern. Orthochromatic plates will reproduce the discolored, the faded, the visually indistinct, or even invisible.

3. Local illumination and time of day or night have become very secondary matters in many cases, by reason of the ready response of modern plates to the various convenient artificial illuminants, as magnesium light, electric light and even

gaslight. Thus the interior of the pyramids and of mines, the alcoves of libraries, the well-lighted studio have become practically alike.

4. Inaccessible places of photography have come to mean only those inaccessible to man. Freed not only from the impedimenta of tents, solutions, etc., of the olden time, but even from the changing bag and heavy and fragile glass, the camera has become equally the *vade mecum* of the glacier wanderer and the ordinary traveller.

5. The division of labor which the modern dry plate permits allows the exposure to be made by the one who knows best what is wanted, or who may have opportunity, and the development to be made by the one whose technical knowledge and skill may elicit the best results. As an illustration from my own experience, some years ago, after having carried the camera to one of the most rugged points in Switzerland, to obtain a series of views of a glacier system, on my return, although I had perhaps as large and successful experience in development of dry plates then as most amateurs, for want of time, combined, I confess, with some want of faith in the plates, I readily committed their development to Mr. W. H. Rau, and I am fully satisfied that he obtained delicacy of results that I would have fallen short of.

Prof. Himes then called attention to the photographic record work done in England, and other similar applications of photography. After a few remarks from Dr. Leffmann the discussion was taken up by Mr. Louis Edward Levy, who said:

THE PHOTOGRAPH AS A RECORD.

A photograph being in its very nature a record of the thing photographed, it follows that the subject of photographic record work is limited only by the definition of the phrase itself. If we confine this definition to the idea of recording present facts for future reference, and leave out of our purview all the many illustrative uses of photography, all its utilities as an art of graphic reproduction and all the vast domain of its æsthetic capabilities, there still remains a practically boundless field of photographic work.

Much of this field has already been surveyed by Professor Himes in his presentation of the subject. Reverting to such of its aspects as have particularly impressed me in the course of my experience, I am brought first of all to a consideration of the peculiar value of photography as a means of recording the personal data of history.

Looking around in any portrait gallery, such, for a typical instance, as the large collection of portraits from the Revolutionary epoch recently loaned by one of our public-spirited citizens for exhibition at Independence Hall, or the similar collection of pictures that hang permanently on its walls, one feels instinctively that however graphic may be these representations, they are not autographic. They are, so to speak, translations of the original theses, good, bad or indifferent, according to the competency of the translator.

They bear inevitably the impress of the translator's individuality; like all translations, they render their subject in the form of a paraphrase, which may mean more or less, or something very different from the original. The consciousness which directs the artist's hand unavoidably affects, to a more or less positive degree, his perception of his living subject, and the portrait thus produced, however skilfully it may be drawn or painted, is a reflex, not alone of the physiognomy of the subject, but also of the artist's conception, or preconception of that subject. Frequently, this preconception results in a deliberate and studied idealization, admirable enough in its way, but wholly worthless as a record of the truth of nature.

In this respect there is nothing that approaches the value of a photographic portrait. Assuming it to have been produced under a normal light and through normal instrumentalities, the photograph presents its portrait record faithfully, slavishly perhaps, but still with absolute fidelity. The photographic portrait, whatever other quality it may possess or lack, has at least the one quality of verisimilitude. There is, in fact, no other province of photography so especially its own as that of portraiture. Even though the subject be unfavorably lighted or ungracefully posed, and however deficient the picture may be in its artistic elements, the photographic portrait, unless deliberately modified by a retoucher's hand, is, in its very essence, true to nature, and, therefore, true to the truth. That minute fidelity to nature,

which is the most marked characteristic of a photograph, attains, indeed, a special quality of value in the case of a portrait. The subtle verisimilitude of the photographic record affords a representation of nature whose truth and realism no artistic idealization, however well directed or well informed, can adequately replace, and where, as in portraiture, the record to be made is that of the most subtle of all of nature's expressions, the expression of human nature, the record of the camera is at once the most impartial and the most complete.

The value of photographic portraits as data for ethnological studies, and ultimately, doubtless, for sociological deductions as well, has been fully recognized by competent biologists. For scientific purposes photographic records are, of course, alone available, but the significance of such records is forcibly suggested to us when we look upon the portrait busts of Greek or Roman leaders which have remained to us, or the physiognomies of the Middle Ages as preserved for us on the coins and painted miniatures of that period, or those of the later generations depicted for us by Dürer and others of that epoch. At the present time we have photographic portraits of only two or three generations at most. The oldest of these are the daguerreotypes of some fifty years ago, and they are but few and far between, rare heirlooms of the camera's earliest days. Nowadays, however, almost every one has a picture "taken" more or less frequently, and in time these portraits, now produced in time-proof form by various processes, will afford valuable records for the scientist's use. Already our family albums throw an interesting light on the subject of heredity, and afford extensive data for such a study of that subject as that published some years ago by the late Professor Cope in the *American Naturalist.*

There is another aspect of photography as a means of recording facts that has especially come to my notice, namely, in recording topographic changes. I was recently shown by a friend a little snapshot picture, made by him last summer at Fort Sumter, looking inward toward Charleston harbor. It happened that the point of view was almost identically the same as that from which I had myself made a stereoscopic view some twenty-five years ago. Both exposures were made at low tide, and the changes which the harbor improvement at Charleston had effected in the conformation of the landspit which is visible at low tide were very markedly brought out by a comparison of the two photographs. Another similar instance is the change produced in the brink of Niagara Falls by the erosion of the cataract, and which may now be studied in photographs made at intervals of thirty to forty years. No drawings could render this subject with such graphic detail as do the photographs, which afford a survey at once accurate and indisputable.

In fact, surveying by photography is now being reduced to a science, but I will not further dwell upon the subject. The uses of photography for the making of scientific records are as obvious as they are many, and the field of its application is constantly widening.

PHOTOGRAPHY AND COLOR.

Mr. F. E. Ives remarked that there was still one feature that had not been touched upon, namely, the importance of the element of color in some record work. He said that the kromskop system was now being successfully employed to record and reproduce colors as well as forms in disease and surgery, and quoted Dr. Keen[1] to show the undoubted success and importance of such applications.

Dr. Himes: There is one point not fully brought out in these statements in connection with the kromskop—that is the reproduction not simply of color, but of that often equally characteristic but less definable appearance of lustre.—*Journal of the Franklin Institute.*

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[1] A demonstration of color photography at the College of Physicians of Philadelphia, by Mr. Frederic E. Ives, took place on Wednesday evening, November 1st. In introducing the inventor, the Vice-President, Dr. W. W. Keen, called attention to the value of this method of photography as applied to several departments of medicine, especially in pathology, surgery, internal medicine and dermatology. The difficulty of reproducing by drawings the exact pathologic appearances, for example, of pneumonia, apoplexy of the brain, infarct in the kidney, cancer of the liver, etc., is very great, but a good photograph by this method would give a far better and more accurate idea of the appearance to the student. The tints are exactly reproduced, so that whether it is employed in teaching or in demonstration of specimens in connection with a paper before a society, it would be invaluable. The same would apply to surgery, as, for example, the appearance of an ulcer, of an ulcerated carcinoma

A LEADING LINE.

HAVE you ever seen a photograph by Falk or Steckel or Strauss? If you have you will remember that there was a something about it which stamped it as different from other photographs. You might take a score of portraits by each of these workers and shuffle them all together, but a man acquainted with their work would unhesitatingly and correctly sort them into three piles.

So it is with perhaps a score of men in America. Not all of them "big men," for a big man is likely to lose his personality in a big firm, but all of them successful men. What is the cause of their success? One cause, enough for the present, is the individuality of the worker. If a man's work is out of the usual run, it is soon noticed. If there are three men in your town there may be room for all of you and yet all of you feel hard times. Give the people something different. F. Stanard's practical little article in *Mosaics, 1900*, gave a good hint as to using a window. He speaks of the idea that his window was not put to the utmost use possible, and he thought of a scheme to attract. He says: "Just then the railroads had begun issuing those very large photographs, and I wrote to the company in Pittsburg that if they would loan me four for a month, I would show them. Well, the company agreed and delivered them to me. One day everyone was surprised to see my window all frosted over by being daubed with putty. Folks who passed half a dozen times a day without noticing the window now stopped and stared for a moment. Next day the secret was out. Late at night I cleaned the window real good, and in the morning there were four enormous photographs filling all the window. Just along the front there were four little daguerreotypes and six positives on glass. It made a good contrast, and as the large pictures had never been seen in the town before, everybody came to see them. At the end of a month the window was frosted again for a day, and then I showed bromide enlargements of the church and school-house and depot. I keep trying to get something new, and always change. One Christmas I just piled the window full of brush with a stuffed coon in it."

People are, as a rule, well satisfied with the photographs given to them. They are suited with the likeness and the polish, the clever retouching giving a clear, smooth skin. Did it ever occur to you that there is something better than pleasing and satisfying a sitter? There is. You may show them something new that will quite take them by delighted surprise, and something which will "stand by" them—and you.

The leading line I refer to at present is naturalness. If you can give a mother a real representation of her child as she is, and not a slicked-up Sunday-school sort of a picture, she will be delighted. Do not imagine that they are wedded to the usual thing. Put one or two real genuine child pictures in your case and hear what is said. J. Rees, in speaking of the mistake in overposing many subjects, gets down to the sense of the matter when he says, in speaking of a portrait of mother and child:

"Would it not have been far better to have focussed beforehand—not necessarily with a portrait lens—upon a low-swung bassinet or cradle, got the mother to have put the child in, and caught the interchanged smiles between the two as she raised herself from so doing; or, if it be a nurse that takes the mother's place—as she unfortunately is given the frequent chance of doing nowadays, in this as in far more important directions—would she not have looked far more taking, and in character, with her cap off, sitting at the cradle side, some little knicknack in the way of sewing in her hands, and smiling

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of the breast, of cystitis, or the varying appearances on section of carcinoma and sarcoma.

In medicine, he was a little uncertain whether the instrument was delicate enough to show the taches rouges of typhoid, though it would probably show the petechial spots of purpura and possibly of typhus. Jaundice could be well shown, the appearance of the vaccine vesicle, the differentiation between smallpox and chickenpox would be facilitated very much by such photographs. In dermatology it goes without saying that all of the affections of the skin in which color enters could be well reproduced. It would be well if our hospitals especially would furnish themselves with outfits for the purpose of taking such photographs, and great improvements undoubtedly would follow the wide use of the method.—*Phila. Medical Journal, Nov. 4, 1899.*

at the baby, rather than as she is, ignoring the baby and smiling at the photographer? It can be done, but not by the tedious camera levelling and focussing, piffling arrangement of dress folds, and the rushing to and from the dark-room, now so disconcerting, so wearying, and so much in vogue."

The little girl of three or four, again, why must she be posed standing on the velvet-cushioned old carved chair? or, if sitting, why with one leg curled under her? Why posed at all, indeed? Simply because it is the fashion, I suppose, certainly not because they are usual and natural positions, for I am certain that anyone who chooses to observe children will find that, when they, in the mother's absence, stand on a chair, they almost invariably turn to lean over the back or sides; and that, at the rare times they do sit quietly, they far more rarely sit on a foot and leg. Why not have brought and given her her pet doll, and, if a chair be absolutely necessary, have allowed her to do her nursing leaning against it? The child would then have looked natural, been desirably quiet and tractable, and the proof such a success as probably to have led to the emphatic expression upon the father, and payer's part, when shown it by the smiling mother, of, "My word, Mary, but this is a good one! Better order two dozen, my dear, and inquire how much an enlargement would cost."

Or, there's the old lady with the pleasant face—which, by the way, would look still more pleasant had the wrinkles in it been left severely alone as the folds in her silk dress—hands folded primly in front, and so on.

"It's mother, and yet it isn't," very justly and aptly remarks her married daughter to a friend when looking at the finished product. Place a small set of tea-things on a little table at her side—it would be no great stretch of expense to provide the tea as well, on, to her, so trying an occasion, and let "granny" be portrayed, as with brightened face she is about pouring it out, or lifting the cup to her mouth, and the daughter's comment then would be, "Well, here's mother to the life at last. I must ask what a second dozen would cost."

Look, further, at the kindly old rector in the next row, sixty-six if he be a day, leaning uncomfortably forward in the chair, ignoring the fact of its having arms and a padded back, reading a large cumbersome volume, as likely as not without the glasses no one has seen him reading without for the past ten years—lacking, if not the Promethean spark of life, decidedly the possible vivid one of natural and lifelike position—how can the bazaar order for twelve dozen prints be reasonably expected.

Lastly, take the ever-present wedding group. This must always, of course, remain more of a loving record than an artistic production, for what mortal can hope to render, in anything but set and formal fashion, so many diverse characters upon one plate, all suffering more or less from suppressed excitement, and ranging from the stately vicar who performed the ceremony to the bride's brother, a medical student at "Barts," who was very jolly but anything but stately; and including portly father, regretful-looking mother, blushing bride, happy bridegroom and jolly bridesmaids. But the group having been disposed of, why not have suggested taking the bride by herself? What a fine chance as a rule lost! A lovely girl, in her prime, at her best, *and in her best clothes!* How eagerly would not the newly-made young husband have closed with the suggestion, with the subsequent one of an enlargement, and how willingly have paid a good price for it! Finally, and chiefly, what an attraction for three or four days in the window *by itself!*

There has barely been a start made in the right direction, in this photographing of that which, giving human interest, would be at once recognized by men and women at large as a faithful depicting of what they are all familiar with, and which oftentimes, in appealing to a special spot, would be treasured, as serving to keep alive and fresh individual experiences, gay or grave, pleasant or regretful.

So much in the way of criticism, and a suggestion of fresh direction of style of work. Almost an equally important item must be the manner in which the work should be exhibited to greatest advantage. Too many small items there always are in the window. Attention under such circumstances cannot be led up to, and concentrated upon, a one central picture.

This could be very easily managed by taking out three-fourths of the more commonplace work, and rearranging that left in a more artistic fashion, to serve as a foil to a one enlargement of an assured and acknowledged success; one of such subjects, for instance, as those already suggested, the baby in the cradle, the child and her doll, the bride, or the old lady at her tea-drinking.

PHOTO-CERAMICS BY THE PEPPER PROCESS.[1]

BY P. ELIFF.

THIS is a process of producing photo-ceramics or enamels, particularly suitable for lantern slides. Roughly speaking, this consists of coating a piece of glass, china, or earthenware with the pepper solution, and then printing in contact with the negative in an ordinary printing frame, after which it is taken out and dusted over with ceramic color, and when sufficiently "developed" it is fired in a muffle furnace, which makes the image practically a part of the glass itself.

SENSITIZING SOLUTION.

Benzole	8 ounces.
Pure White Pepper . .	4 "

Put the above into a sixteen-ounce bottle and allow it to digest for at least a week in a moderately warm place—the longer the better, for it is necessary that the benzole must have extracted all the essential oil from the pepper. This must now be well filtered by passing through a tuft of cotton-wool. To each ounce of the solution thus obtained add ten drops of best hard oak varnish, and in cold weather four drops of castor oil, reducing the latter, according to temperature, to nothing in summer. This is the only mixture required.

Thoroughly clean and coat, by flowing, a glass plate with this solution. It dries in a few minutes, and can then be placed in contact with a transparency (not a negative) in the printing frame.

For the making of the transparency a very slow plate developed with metol to the same density as is required in the finished ceramic slide is most suitable. The plate should be protected from dust until dry, when it can, if desired, be kept for some weeks for future use, if protected from light. The exposure should be made in diffused light, and will vary from three or four hours in summer to as many days in winter. But it is almost impossible to overexpose.

The action of light is to harden the sensitive surface, and thus the exposed portions will resist the adherence of the ceramic colors when brushed over with a camel's-hair mop, while the unexposed, or partially exposed (the denser and half-tones of the transparency), will absorb in proper gradation the powder as applied, and the picture is thus gradually built up. If the desired density has not been gained when the film refuses to absorb more color, the slide should be gently warmed before the fire for a few moments, when it will again absorb more of the powder, and this can be repeated until the necessary depth of color has been reached. Underexposure requires very little heat, or none at all; overexposure, on the other hand, demands more heat, and thus, by using more heat in development, the results, in the event of overexposure, are practically the same as if the correct exposure had been made. Thus, it will be seen, if ample exposure is always given, there need be no wasters produced by this process. Development should be carried somewhat further than desired in the finished slide, as the color becomes more transparent in firing, on account of the flux which the color contains.

After development dust off any superfluous color with a wad of cotton-wool, when the slide is ready for firing.

A simple stove may be made of iron tube, flattened on two sides to an oval measuring about 6 inches by 4 inches, which can be fitted between the ribs of an ordinary fireplace. A shelf of iron or nickel must be made to slide within this "stove," and upon this a thick coating of plaster-of-Paris should be dusted and flattened out to form a level bed, upon which the slide is laid. The heat should then be gradually raised until the color, which before was

[1] From a paper read before the Leeds Camera Club.

perfectly dull, is now fully glazed. The time occupied in reaching this point should be not less than thirty minutes. When sufficiently fired, the slide should be allowed to cool gradually, or there will be danger of its cracking.

The slide is now finished, and if the edges of the glass are ground cover glass and binding strips are quite unnecessary, and thus the lanternist's impedimenta are considerably reduced in bulk and weight.

PHOTOGRAPHS IN COLOR.

THE subjoined account of the McDonough method of photographing in colors, which is being commercially introduced by the International Color Photo Co., of Chicago, was given before the Buffalo (N. Y.) Academy of Sciences, March 3d, by Mr. J. R. Key.

The McDonough method is based on the scientific principle of the mixture of colored light. Young, Helmholtz, Maxwell and other scientists have demonstrated that the elementary or primary colors of a ray of sunlight are red, green and blue, and the mixture of these on the retina of the eye produce the color sensation of white, and that all the various shades of color are resultant of these three fundamental sensations. To photograph color by the McDonough method there is added to any camera a taking screen and chromatic balance shutter, which is a color filter, and through these two attachments the light from the object photographed impresses the silver haloids on the erythro dry plate, which produces the negative. The taking screen is a plate glass coated with a gelatine emulsion and ruled in red, green and blue parallel lines, from 3 to 600 to each inch in the order named. The taking screen is adjusted in a metal frame inside the camera and near the plate-holder and attached to a lever conveniently placed outside the camera, where it can be manipulated to throw the taking screen against or in contact with the emulsion side of erythro dry plate after slide of plate-holder has been withdrawn to make the exposure. After exposure of plate the lever is again moved, carrying the taking screen away from the erythro plate, allowing the slide to be replaced in holder and a fresh plate brought into position for another exposure.

The chromatic balance shutter or color filter, which has its place on hood of lens, is a metal shell fitted with sectors of lemon yellow and orange-colored mica or glass, which are movable and actuated by a metal tip or finger, and is to balance the varying conditions of illumination, there being less blue in the light in sunlight than when the sky is cloudy or when photographing indoors. The adjustment of the shutter for these differences of illumination is by moving the metal finger toward the words "sun" and "shade" that are engraved on rim of shutter and which open or close the colored sectors of shutter or filter. The erythro plate is the normal dry plate, specially orthochromatized or dyed for the red wave lengths of light and also sensitive to the other wave lengths. A negative made under conditions noted will show in duplicate the lines of the taking screen, but with different degrees of opacity according to the light value that has fallen upon the silver haloids of the erythro dry plate through the taking screen and chromatic balance shutter.

In making transparencies for the window or lantern slides for projection in the optical lantern or stereopticon, these color value lines of negative are transferred to the positive, which is made in the usual way by superposition, using any good make of transparency or lantern-slide plate. Having made a good positive it is ready for the viewing screen. This is a thin glass plate covered with an emulsion of gelatine and ruled with the same red, green and blue lines as the taking screen, in the same order and number to each inch. The emulsion side of positive and ruled side of viewing screen being placed in contact, the lines being in parallel or register, the colors will appear as in the object photographed. When this is done fasten the positive and screen together with spring clips, and bind the edges with adhesive strips. Photographs in color on paper are made by placing the McDonough negative in a specially devised printing frame, placing in contact with it the chromatic sensitized paper, which is a printing-out paper, ruled with

the red, green and blue lines in number and order as on taking screen, and by movement of registering screws parallel the lines of negative and chromatic sensitized paper, print in sunlight as an ordinary photograph, tone, fix and mount as usual. Pictures in color by the McDonough method for magazine, book and catalogue illustrating are produced from copper halftone plates, made from the same negative and printed in black ink on paper ruled with the colored lines.

PHOTOGRAPHS IN PLASTER RELIEF.

A WRITER in the *News* resurrects an old method of producing photographs in plaster relief, which may prove suggestive to those in search of a novelty for the dull season:

For this method it is necessary to coat a piece of clean glass the same size as the negative to be used with a strong solution of gelatine, made by placing gelatine to the amount of, say, half a testglassful in about half its quantity of water, and applying heat to dissolve it. Practically, a saturated solution should be made. While still in a liquid state pour it steadily over the glass plate, and allow to cool and set. When dry sensitize by placing in a bath of

Bichromate of Potash . .	15 ounces.
Strong Ammonia . . .	1 drachm.
Water	2 gallons.

This is the ordinary carbon tissue sensitizing bath, and will answer our purpose quite well. Leave the plate in this for ten minutes, then rinse for about four seconds under the cold water tap. This rinsing does not wash away the sensitizer, which has by this time penetrated the gelatine, but only carries away the surface coating which otherwise by crystallizing out would spoil the plate. When this is dry we can proceed with the printing, which is done in the usual way.

We shall require some form of actinometer to time the printing, as the glass not being flexible the progress of the print cannot be examined in the ordinary way. There are several patents on the market. Wynne's being perhaps the best will be found most excellent. Having exposed the negative to the light sufficiently, we proceed as follows:

Take the gelatine plate—which now should have a faint image from the negative on it—and place it in tepid water, taking extreme care not to have the water at all hot, the object being to dissolve out the bichromate of potassium that was used to sensitize the gelatine. At first the water will rapidly color, but after the upper strata—if we may employ the term—have been dissolved out, the process of elimination proceeds more slowly. This is no disadvantage, as the soaking of the plate is necessary for the swelling and consequently the relief of the gelatine. We have found that a whole day's soaking is none too much.

It will now be noticed that the gelatine has acquired a large amount of relief, and that those parts that were black in the negative—in other words, those parts that were protected from the action of the light—have swelled the most. This is accounted for by the well-known fact that bichromated gelatine, when acted on by the light, is rendered insoluble; consequently, those parts that are protected from the light by the opacity of the negative still remain as they were before—that is, soluble; and consequently, when we place the plate in the water these parts swell, following the usual custom of gelatine when placed in an aqueous solution. We will now proceed with the next operation. Take the wet plate, just as it is taken from swelling in the water, and place it in a dish of its own size. Then in a six-ounce graduate place a quantity of fine plaster-of-Paris. Nearly fill the tumbler up with water, stir vigorously, so that all the plaster is in a state of motion in the tumbler, and then steadily and evenly pour the contents of the tumbler into the dish. The plaster will quickly settle so that it covers the whole plate to the depth of about a quarter of an inch. When settled down draw off the water by means of a piece of India-rubber tubing, employed as a siphon, disturbing the plaster as little as possible. Allow the dish to remain unmoved for some little while, so that the plaster may become somewhat set; then, while it is still damp, take a knife and cut around the outside of the plate, and gently raise same from the dish, taking care not to disturb the plaster. Place the plate with the plas-

ter on it in an oven and let it bake there till it is quite hard and firm. The plate should, indeed, remain in the oven until the heat has penetrated right through the plaster, dried it up, and by its still continuous action burned up the gelatine, leaving the plaster free to come off without applying pressure. It will then be seen that we have got a mould of plaster of the picture that the negative represented, and in order to get a plaster cast in relief, all we have to do is to treat the mould to the same series of operations that we did the plate with the gelatine relief on it.

One of the chief points of failure in making these casts is that the plaster is poured on after it has settled in water, and consequently is all lumpy and uneven. The cure is obvious.

We have now shown how relief pictures may easily be made, and if this short article be the means of inducing anyone to devote some attention to this charming and neglected branch of photography, we shall feel that our efforts have not been in vain.

Both these methods are, of course, well known by certain people interested in photography, but the majority who find pleasure in practising the "Black Art" are very much at sea, if not totally ignorant, of the methods of producing photographs in relief. They are well worth careful trial by those interested.

THE QUESTION OF STUDIO LIGHTING.

BY WILBUR GRUBEMAN.

THE photographer of to-day has got quite a number of ideas which go without question. They have passed from the region of experiment and have become axioms. One of these ideas, which only cropped up within the last few years, is that for a studio light there is one position, and one position only, that is, facing the north. This theory is a striking illustration of the mechanical commercialism which took hold of photography with the introduction of the dry plate. The worker of the past, with his practical chemical knowledge and close application of a quarter of a century, found that his neighbor who had never seen a camera suddenly became possessed of one, and twelve months afterward became a professional photographer. There is no doubt that this sudden simplifying of photography led many to take it up before they possessed a sufficient knowledge of the art. It was forgotten that lighting and posing of the sitter were *the* essential things of photography, and that when the mechanical and technical side of the work was simplified it did not involve a similar easing on the art side.

If I were consulted—as I have several times been—by a man wishing to earn his livelihood by photography, I should almost feel inclined to say: "Do not adopt a north light." Why is a north light preferred? For the same reason that an amateur buys "something in a bottle" when he wants a developer, that is because it is the easiest. A north light is constant in direction, and is the most even of lights. Therefore it is the easiest to work with. But does not this very ease of working tend to draw a man to a few set lightings? It inverts the whole proposition. Instead of studying how best to suit the light to our sitter we try how best to adopt the sitter to the light, and are only a little advanced beyond the stage of "a curtain, a table, a vase, and a book." When Adam Salomon returned to Paris after the Franco-German war he took with him a photographic experience second to none; and yet, with every opportunity for choice of locality, he chose a southern lighting. With a north light there is little need to move the blinds, and with a fixed background the amount of thinking required is reduced to a minimum. The man who succeeds is the man who has difficulties to overcome. Not a very cheerful statement, perhaps, but a very true one. There is a system of lighting which has often been advocated, and which is very satisfactory in the hands of a capable man. Its great advantage lies in its adaptability to southern lights, which are often a necessity in large cities, though much less so now than a few years ago, before architects were so very much given to putting a studio at the top of almost every building.

This system is to use screens of a light open net—two or three thicknesses. By having these screens mounted on light, movable frameworks any diffusion or concentration of lighting may be obtained. A few days ago a photographer complained to me that his lighting was "too fierce." He was in despair, for he could not get his sitters away from that light. And he is a capable man, a man whose name is known to every reader of WILSON'S. If only he could escape the concentration of light, by getting twelve or fifteen feet away from it, he would be happy. Here is a case where a man has within his grasp the most exclusive trade of one of the largest cities in the country, and he bitterly feels his limitation in the matter of light. He has evidently built for north lighting, and has overdone it. The results obtained by "getting away from" a southern light, and diffusing it by the skilful use of movable screens—blinds being entirely done away with—were so much admired that it was treated as a "secret process," and good money was paid for the secret. Its objection is that skill is required. Its advantage is that with skill a wide range of results is obtainable, in fact, the light is constantly revealing new possibilities. The unskilled man or the man of only moderate ability will not be far wrong in sticking to the easiest light—which is the north light; but this light is not essential to the man of ability and recourse, and may almost be said to handicap rather than to help him.

A GOOD NEGATIVE.

THE connoisseur in negatives had a hard time of it when the newer developer began to gradually challenge pyro. The old theory was that a negative well-stained with pyro was the best printing negative, and that the stain helped the result. When clear negatives, free from stain, were first produced, there were several arguments advanced in favor of the old pyro negative; one was that if the stain were removed the negative appeared deteriorated, to which it was replied that if so the stain had been merely hiding defects. Another argument was that the stain was not an even one, but that it was graduated in proportion to the strength of the silver image. It was indeed possible, it was contended, to entirely eliminate the silver, and still leave an image, one consisting of stain only. The accepted theory of to-day is in favor of the negative which is "pure silver in clean gelatine on clear glass." The stain, it is said, merely prolongs printing, and the negative which is perfect in gradation, and gives the quickest print, is preferable, other things being equal, to the negative which prints more slowly. When we come to practice, we find that every man is a law to himself, and that the negative that one man prefers is by another deemed ghostly. The one thing on which all are agreed is that the negative is not the end aimed at, but only a means to an end, and that the end is a perfect print. Mr. E. J. Wall recently hit the mark when he said the good negative is that which gives the photographer what he wants. He did not care whether the negative represented correctly all the graduations of the light reflected from the subject, whether there was little or much stain, or whether it was all stain, as long as he got what he wanted. In the first place, you have to consider the subject, which may be extremely flat. By intensifying the contrasts in your subject, you may get a negative which will give a good print; on the other hand, you may have a subject which has strong contrasts, and, by reducing the contrast, get what you want. So it is necessary to give the subject consideration. For example, take a line subject, a diagram, something in black-and-white. You wish to copy it, but what would be a good negative for that class of thing would be totally wrong for a half-tone subject. For this reason it is impossible to define what is a good negative. Next comes the printing process to be considered. All printing processes do not yield absolutely the same gradation; that was very well known, and here Mr. Wall gave some interesting hints with a flat negative, and desiring a print strong in contrast, he would use the cold-bath platinum process. With a weak negative, for a strong print, he would take gelatino-chloride or collodio-chloride. Carbon or albumen would print fairly well in the case of a normal negative, and he ventured

to think albumen was not yet dead. For a flat print from a harsh negative, the hot-bath platinum paper would be preferable. In the event of having the option of using one paper only, his choice would be bromide paper. Any desired result could be obtained with this paper by using either slow or fast brands, exposing nearer to or further from the source of light, and developing with stronger or weaker solutions, as the case may require. After what he had said, he did not see how he could possibly define a good negative, but every man must do that for himself. His own idea was, that it was one absolutely without bare glass anywhere, and yet without any absolute opacity. There were some schools in photography to which a good negative implied one with absolutely nothing in it sharp. Then the happy medium—some things sharp and some fuzzy, and the old school who wished to be able to read distinctly every sign or notice. However, he knew what he wanted and tried to get it, considering, first of all, what plate he was going to use (always a color-sensitive plate), and then the question of the yellow screen, its use or not, according to the subject. For out-door work, he invariably took with him an exposure meter, estimating just one or two exposures to get the right gauge, after which he relied on guesswork with tolerable success. Coming to the development, he looked over his notes, if any, and then started to modify his developer accordingly. This was always now pyro, and metol, and carbonate of soda, and he knew exactly its capabilities. If necessary, he was not above intensifying or reducing locally or altogether, and even faking on the negative. After all is done, and he has got a print which satisfies him, he says he has got a good negative. The practical photographer, be he professional or the man who amuses himself, seldom cares for the science of the subject, but tries for the negative which gives him what he wants, and this is the good negative.

WHEN SOMETHING GOES WRONG.

PHOTOGRAPHY is very much a matter of careful experiment, and the man who never runs up against some mysterious failure is indeed lucky. These failures may arise from any of a score of different causes, and when they occur the remedy adopted by most workers is either to hunt up the matter in a text-book, or to worry the manufacturer, or to write to his editor. Any of these ways is good, but it is often impossible for one at a distance to locate the cause of trouble. Probably on account of an unusually heavy mail of questions, the editor of the *British Journal of Photography* suggests that the man who tackles a question in a "scientific" spirit will the most quickly overcome his trouble. Do not be frightened by the word "science." Science is, after all, very much like common-sense, and many people who have not received any scientific training have, nevertheless, the faculty of approaching a problem in a really scientific manner. There is something not understood or misunderstood; something which happens which ought not to happen, the reason for which does not appear. The scientific spirit leads the photographer to so adjust his method of work as to frame an intelligent question in regard to the difficulty, to which nature may make an intelligible answer. For example, where spots appear on prints during toning and fixing, one would naturally modify the conditions of the routine—say, the water or the hypo—so as to trace the difficulty to its source.

Much assistance is, of course, derivable from a theoretical knowledge of the causes likely to lead to certain ill effects, and we do not for one moment wish to be understood to deprecate such assistance; but, at the same time, many difficulties would cease to be such if photographers possessing no great technical knowledge would seek to approach them in a spirit of investigation, assuming an agnostic attitude until reason appears for the assignation of the trouble in some particular quarter.

It is often difficult, and in many cases impossible, for anyone unacquainted with the photographer's methods of working a process to pronounce a definite opinion in regard, let us say, to stained or faded prints merely by the inspection of several specimens. Indeed, the difficulty is often intensified by the meagreness of the details—such as paper, toning bath, etc.—furnished by the applicant.

Very frequently no one is in a better position to help the photographer out of a difficulty than is he himself; we are speaking principally of spots and stains on prints, things which will make their appearance in the best-regulated establishment. We would, first of all, suggest that every practitioner should keep a watchful eye on the literature in the photographic press, remembering that what are to-day the difficulties of others may be his own to-morrow. Practised workers are constantly recording the way in which apparently inexplicable troubles were traced to causes which, for a time, eluded detection by their very propinquity. Black spots, for instance, from grit in the wash water or particles of metal rubbed from the bearings of a squeegee; spots on negatives simply caused by the use of a pyro-soda developer several times, whereby it is liable to deposit insoluble matter (or the same thing may happen by mixing fresh developer in a measure from which the old has not been rinsed). Then we need not call attention to the researches which various chemists have conducted at the request of manufacturers of certain papers. Systematic filing of cases of this kind will soon place the photographer in possession of the cause and cure of almost all the ills that prints and plates are heir to. His own observation and judgment must be called into use to help him form a correct diagnosis of the malady from which his own products are suffering; but this is a far easier task when a description of the symptoms of previously diagnosed cases is at hand for comparison.

A careful noting of what is written month by month, and a careful *remembering* of what is noted, will help to solve many a difficulty. Keep an index of things worth remembering. It will pay.

STAINS ON FINGERS AND ON PRINTS.

STAINED fingers are not now, as once, the inseparable mark of the photographer. The old term of "pyro stain" is unknown in the experience of many latter-day workers. The old wet collodion days provided a stain almost worse than the brown mark of pyro. If special precautions were not taken by using rubber gloves, or special plate-holders, or some other device intended to keep the fingers from the collodion, the stain became almost black. It used to be called pyro stain; but, though the blackness usually accrued during pyro intensification, the blackness was, in the main, rather caused by deposited silver than the pyro itself, as is shown by its ready removability by silver-stain solvents.

The stains now more frequently met with, among amateurs especially, are, however, when a pyro developer is used, actual pyro stains, and are very difficult of complete removal. The best recommended plan in practice is to rub the fingers with moist chloride of lime, followed by a soaking with hypo solution.

A pyro stain is calculated to catch the worker who "trusts to luck," for its action seems to be very unequal. Some days it may be used with impunity. The more sulphite in the developer the less the pyro appears to stain. Then, too, the state of the fingers is to be considered. If they have been dabbling in some other chemicals, there may a trace of this remain in the skin and prepare the way for drastic action by the pyro. It is not always easy to wash our hands "chemically pure." We know how difficult it sometimes is to get rid of an unpleasant odor even by repeated washings. If, before developing, the operator has been washing prints, or even toning only, their immersion in the developer will quickly bring about a very deep seated and fast stain. It is this difficulty of getting rid of chemicals used previously which usually causes the trouble. We are apt to think that if we cannot *see* them they are not there.

Worse even than a good honest pyro stain is that dirty ingrained stain that looks as if fingers had been used to weed a garden, and had then been wiped on an old sack instead of being washed. In working a good toning bath the fine lines and folds of the skin receive the stain, producing a dirty gray effect when the toning operations continue for some time. When large numbers of prints are in succession passed through the washing waters, silver stains of a similar nature are again produced. It need scarcely be said that

modern print-out paper and that type of paper is far less liable to produce the effect we speak of than home-sensitized albumenized papers—another gain for modern workers. The deepest stains of all are naturally produced during this home-sensitizing of paper. Splashes and handling the paper after sensitizing render the deep-brown stain inevitable and very tough to remove.

The handling of chloride of gold or its solution will give a purplish stain of reduced gold, which nothing but strong cyanide solution will remove.

To prevent staining is better than to hunt for remedies. The use of lifters to raise the plate from the developer will help in part. India-rubber gloves—or even fingerless mittens—are much derided by many, and are much used by those who have honestly tried them. For the removal of the many silver stains, either from skin or clothes, there is one remedy which is said to be the best. Let a strong stock solution be made (kept in a stoppered bottle) of iodine dissolved in water by the aid of iodide of potassium, say a quarter of an ounce of iodine and sufficient iodide to dissolve it in an ounce of water. The stains should be painted with this solution, which must be allowed to remain for, say, half a minute for its action to be complete. The stain is then converted into a dirty pale yellow, masked by the brown of the iodine. Cyanide solution will at one remove the brown, and, after a while, the dirty yellow hypo solution will do the same, but more slowly. Some photographers have a great objection to cyanide in any form, and others do not like to contaminate their fingers with hypo. These can be accommodated by following the iodine with ammonia, which destroys the brown, but leaves what is somtimes an almost invisible yellow.

If this is used on white linen, such as cuffs, care must be taken to see that a sufficiency of iodine is used to soak into the stains, which may go deep into the fabric.

From finger stains to print stains is an easy transition, for the latter are due to the former much oftener than the careless worker imagines. Where vignetting is done the staining of the white imprinted margins often is a sore trouble. These stains are often avoided by the careful man, but to all of us trouble comes occasionally. Fortunately, a stained print can nearly always be saved with proper handling. According to T. N. Armstrong, a printer has a complete power in his hands for the removal from the surface of a gelatino-chloride or bromide print of flaws, the carrying out of which is a very simple operation indeed.

In cases of prints upon Aristo paper, when such blemishes put in an appearance, a worker should not hesitate to carry out the usual routine of toning and fixing his prints, even although they show very pronounced blemishes (often from contamination of the paper from dirty fingers, etc.); and, when it has been seen to what extent such blemishes occur, after such prints are carefully washed and placed away by themselves for special treatment, a weak solution of ferricyanide of potassium and hypo should be prepared in a small cup or other vessel, by means of which any ordinary mark or blemish may be made to disappear as if by magic. This chemical is invaluable to the photographer, if used in the right way, but if carelessly used it will defeat its object. The great secret of success in the removal of such blemishes lies in the manner in which the solution is applied to the print, for it will be manifest to anyone knowing the action of ferricyanide upon a silver print that on no consideration whatever must the entire print be immersed in the solution, but means must be employed whereby the image at no time receives any application of the solution employed to remove the stains only.

Having prepared a small quantity of ferricyanide of potassium (a few ounces is sufficient), by placing a small crystal of the same in, say, a couple of ounces of clean, cold water, and then adding a few drachms of a saturated solution of clean hypo, two or three fairly large camel's-hair pencils should be provided. The prints which have to be doctored are now in a bath of clean, cold water, and each one is separately removed and laid face up on the bottom of a clean, empty porcelain dish of much larger dimensions than the print that is being treated. Having placed the print in the centre of the dish, dip one of the camel's-hair brushes into the ferricyanide solution, and then remove as much of the latter from the brush as is considered to overcharge it, and with the brush just

moistened with the solution paint carefully over and around the blemish it is desired to remove. In a very few seconds of time the most stubborn mark will begin to show symptoms of disappearance, and eventually entirely vanish from view. By keeping the prints in the bottom of the dish, and holding the latter in a slanting position, so that any of the solution attacking the surface of the paper will not ascend toward the printed image, but run downward, there is no liability of the printed image suffering in the smallest degree. It sometimes happens, however, that such marks or blemishes are found in close proximity to the image, in which case the print, before being placed in the dish, must have any surface water removed from it, an operation easily performed by drying the same between the folds of a clean linen sheet; and, when the surface contains no superabundant amount of moisture, and the brushes are not too heavily charged with ferricyanide solution, the smallest speck or mark is easily removed, without any liability of the solution to spread over the printed image.

The application of this solution to the surface of a vignetted print may very possibly leave behind it sometimes a white spot, which shows up at this stage in a somewhat pronounced form upon what now appears to have been a slightly degraded background, and it therefore fails to be treated so as to assume the same tone as the white spot or highest light by going over the entire surface of the print (of course, avoiding the image) with a tuft of cotton-wool that has been immersed in the ferricyanide solution; the entire background will immediately assume the same white appearance as the reduced portion, and not the slightest trace of a black or white speck be left apparent to the eye. After this the prints must receive a very thorough washing and be finally dried before being mounted.

In the event of a harsh outline to a vignette having to be softened, the treatment is very similar to that already described. A tuft of cotton-wool is rapidly run along or around the outline, using the solution of ferricyanide and hypo somewhat weaker, and by rapidly douching the print in a bath of clean water or following the cotton-wool containing the ferricyanide solution with another mop of cotton-wool containing clear water the edges of a hard outline become much softer and more pleasant to the eye.

In work of this kind all that is needed is confidence. With such, a vignetted print need never be lost from the cause indicated.

The Value of a Library. Mr. H. P. Robinson's remarks on reading are interesting as coming from one who has not only read but has also learnt much and put result into his work: An important resolution of the year should be to take a pride in your photographic library, and continually add to it, and to take in all the photographic journals you can afford, and read them. It costs very little, and the advantages are enormous. I say this from long experience. I began taking in a journal in 1853, and have continued to do so, and have now complete sets of all the journals published in England, many American and foreign journals, all the year-books and almanacs, and many of the books, and have congratulated myself ever since on having done so.

I have heard people remark that the only kind of reading photographers care for is their daily paper and the literature of their profession, especially the scientific side of it. I wish they cared still more than they do for the periodical literature of photography.

A YOUNG photographer writes asking about the feasibility of going to England with a view to obtaining work. The chronic state of affairs in England is an over-supply of assistants, and just now this is rendered worse on account of the great falling off of all trade, due to the war. In a list of wages recently compiled, we find that the operators or the retouchers that earn $15 a week are very few. In the case of lady retouchers, for every one that gets $8, a dozen get less. A printer who can command $10 is extremely lucky or a very good worker, and the poor reception-room girl in a second-rate gallery is well paid with $3 per week, for which she also spots the prints. The man who has sufficient grit to strike a job in England has grit enough to succeed better on this side.

EDITOR'S TABLE.

OBITUARY.—We are obliged to record the passing away of two more of the older readers of our MAGAZINE:

DR. A. W. WHELPLEY, Librarian of the Public Library, Cincinnati, Ohio, died suddenly February 10th. He had filled many places of trust in Cincinnati and was a life-long worker in the cause of popular education. He was for twenty years manager of the Unity Course of Lectures, annually, for the cause of charity, and thus met and entertained some of the most noted actors and lecturers of the land. He was always an enthusiastic friend of photography, and as Public Librarian was careful that a good assortment of photographic literature was on hand for students and inquirers at the library. "What is there new in your art?" was one of his standard questions. As a personal friend he was loyal and true to a degree. He was respected and beloved by all the best people in his city.

PROF. C. PIAZZI SMYTH, Astronomer Royal of Scotland for over forty years, died in London in March. Prof. SMYTH was years ago an occasional contributor to our MAGAZINE, for several years a regular contributor to *Mosaics*, and always an earnest photographic worker. We first knew him about 1865, when he sent us about fifty of his glass stereographs of the views he made in Egypt, particularly about the Pyramids of Gizeh, where he lived in a tomb for some time with his wife as a helper. He was author of *Our Inheritance in the Great Pyramids* (1864) and of *Life and Work at the Great Pyramids* (3 vols., 1867), all of which were elaborately illustrated. He was also author of various works on astronomy and meteorology—a prolific writer. We corresponded regularly for a long series of years, and we mourn the demise of another genial friend. Mrs. SMYTH died a few years ago, since which time our friend had been declining.

Riverby, a collection of "out-of-door papers," by JOHN BURROUGHS, has come to our hands to prepare us for spring, and we gladly welcome it. All who have followed Mr. BURROUGHS through *Signs and Seasons;* or with him tramped *Fresh Fields;* or voyaged with him through *Pepacton;* or sung with him and his *Birds and Poets;* or followed the fox with him in *Winter Sunshine;* or with him feasted upon *Locusts and Wild Honey;* or watched the return of the birds with his *Wake, Robin*, close by, will be delighted now to "strike" a trout or catch more glimpses of wild life with the same author in *Riverby*. This, says Mr. BURROUGHS, in the preface, will be "probably my last collection of out-door papers," and is, therefore, named after the "place" where he lives and writes, up on the Hudson River. As Mr. BURROUGHS has charmed the lovers of birds and animals since 1837, we suppose it may be time that he considers a halt, but we shall all mourn if he stops writing books. *Riverby* gives us a fine variety of essays about the wild flowers, mountains, birds and birds' eggs, the prairie, spring, the chipmunk, nature and sportsmen. He seldom leaves the wild woods, and then only cautiously. In *Riverby* we are treated to a journey to the "Bluegrass Region" of Kentucky and a visit to the Mammoth Cave, the book ending with "Talks with Young Observers," something we all need. As we have already stated, our favorite author has taken to writing for the magazines, so that we can again and again continue to quote from him, and need not yet begin to sigh because *Riverby* is his last book, if it should so prove to be. *Riverby* is his eighth volume. Altogether, his books make a bright spot in our library, and the trail to them is well worn. They are published in uniform binding, at $1.50 each, by Messrs. HOUGHTON, MIFFLIN & Co., Boston.

WILLIS & CLEMENTS have published a new edition of their handy little guide to *Platinotype Printing*, which all who use this beautiful printing process should have and keep at hand in the printing-room.

RECENT improvements have made the *Lovell Plate* as rapid as the most rapid plate in the American market, said Mr. J. C. LOVELL a few days ago. In answer to further inquiries, Mr. LOVELL told us that the best professional développer for the Lovell Plate is the pyro-soda formula given in this firm's booklet *Sun Magic*, Wenzel's formula for orto-metol being preferable for amateur (or occasional) use. This little book, titled *Sun Magic*, is worth sending for by those interested in the making of good negatives. It may be had, free, on application to the LOVELL DRY PLATE MANUFACTURING CO., New Rochelle, N. Y.

Wild Animals I have Known, by ERNEST SETON-THOMPSON; published by CHARLES SCRIBNER'S SONS, New York. $2.00.

It would not be easy to say too much in praise of this admirable book. It is charming throughout. The author has illustrated it personally with over two hundred drawings of a unique character. Besides the portraits and genre studies of the animals whose personality he deals with, the margins of the pages glitter with entertaining illustrations of the text. Many of them are at the same time both grim and pathetic. Of the last named, one of four empty animal-traps with the carefully placed tracks of a wild animal plentifully scattered about them is very suggestive. Every story of an animal is preceded by an ingeniously planned *cartouche*—not so easy to understand, since the cartouche of "Lobo, the king of Currumpaw;" of "Silvertop," the Canadian crow; of "Raggylug," the cottontail rabbit, and of "Wully," the "yaller dog," are exactly the same. Nevertheless, they doubtless mean a great deal. Without doubt, Mr. THOMPSON has no peer as an interpreter of animal "talk" and as a delineator of animal character. Moreover, he is a capital preacher of the woods, for he finds *sermons* in all his animals and good in every one of them. All his writings are as thrilling and as interesting as the stories about those wild animals: "Buffalo Bill," "Sitting Bull," "Spotted Tail," and others. He has opened up a new religion which Budda would not have scorned to father, and, like Adam in Eden, he sits among the heroes of his tales and gives "names" as well as speech to them.

This splendid book of discourses has reached a deserved sale of over 41,000 copies. The result of this must be another stampede in favor of using the camera in lieu of the gun, for no one will want to shoot a bird or be cruel to a dog or a rabbit after reading *Wild Animals I have Known*.

Mr. THOMPSON has recently been delighting New York audiences with illustrated lectures, his theme being "Wild Animals," of course.

A RECENT letter from our old friend, Mr. F. L. HAMMER, SR., says: "The *Hammer Plates* have been coming along lively of late. We have had, and are having, a big demand for all sizes; and, in spite of the fact that we built an addition to our factory last year, it has been nothing but nip-and-tuck to keep up with our orders, which we have by hard work filled promptly. The quality of the *Hammer Plate* was never better than it is at this time. In addition to the *Extra Fast*, *Fast* and *Slow*, and our *Aurora Double Coated*, we are meeting a big demand for our new *Special Extra Fast* (*Red Label*) *Plate*, which is intended to meet the demand for an extraordinary high-speed plate."

POLYCHROME is a new printing paper introduced by the CALIFORNIA CAMERA CO., of San Francisco. It is evidently coated with iron and a silver salt, and gives a very charming purple-brown or sepia print. The manipulations are quite simple, and by toning with platinum one may secure all the effects of a platinotype.

MR. W. N. BRENNER, of Cincinnati, has recently removed from his old quarters on *West* Fourth St. to a finely equipped studio at 14 and 16 *East* Fourth St., in the Boylan Building. The new studio is one of the most conveniently arranged establishments in the Middle West, and we congratulate our friend upon his enterprise and growth.

THE *Rembrandt Head Grounds* now being introduced by Mr. GEORGE MURPHY, 52 East Ninth St., New York, are among the best of recent specialties in this line, and we are glad to bring them to the notice of our readers. They are convenient in size (4 x 5 feet), and may be had graded from light to dark, or with clouded effects—and the price is a dollar apiece.

MR. R. GOEBEL, of St. Charles, Mo., sends us a reduced *fac-simile* of a group photograph which has recently brought him considerable local fame and profit. Mr. GOEBEL some months ago went through his old-time negatives and got out all his portraits of prominent citizens who have died during the past forty years. These he made prints of, arranged them in three groups, and made 8 x 10 copies of them. The exhibition of these copies in his display frames and other public places resulted in a considerable demand for prints and liberal notices from the local press.

The pictures were a tribute to the usefulness of photography as a recording art, and an evidence of Mr. GOEBEL's skill as a portraitist such as the public could at once appreciate. There is room for more enterprise of this kind.

KLAY'S *Multiplying Plate Holder* is rapidly coming into that general use it deserves. Among the prints we receive from our readers we are glad to see many examples of multiple pictures, giving from three to twenty different portraits on a single plate. These pictures invariably mean that the photographer is getting good prices for his specialty. Mr. P. DILLER, of Bluffton, Ohio, will be glad to supply a booklet about this holder.

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MAY, 1900.

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DEVOTED TO PHOTOGRAPHY, MONTHLY: ILLUSTRATED.

HOW TO BE PHOTOGRAPHED . . . 193
TO THE PHOTOGRAPHERS OF AMERICA . . . 196
A "HIGH-CLASS" OPENING . . . 196
A REVERIE. By A. G. Marshall . . . 197
GEORGE EASTMAN'S GENEROUS GIFT . . . 199
THE COMPOSITION OF A PICTURE. By Hy. J. Dobson . . . 200
PLATINOTYPE TONING. By Prescott Adamson . . . 204
ENGRAVING METHODS . . . 207
PRACTICAL METHODS AND FORMULÆ . . . 208
LETTERS TO JACK—AND THINGS OLD AND NEW . . . 210
ART IN THE ATLANTIC MONTHLY . . . 212
WHO WILL WIN THEM? . . . 213
THE PHOTOGRAPHER AND THE SCHOOLS . . . 214
PAPERS FOR PROFESSIONAL PHOTOGRAPHERS. By John A. Tennant . . . 216
OUTDOOR WORK . . . 219
THE COMING ECLIPSE . . . 222
DEVELOPERS, OLD AND NEW. By C. H. Bothamley . . . 225
SUPPLEMENTARY LENSES FOR ALTERING THE FOCUS OF DOUBLETS . . . 228
THE DEVELOPMENT OF ILLUSTRATION . . . 231
THE INDIANA CONVENTION . . . 233
KROMSKOP COLOR PHOTOGRAPHY . . . 234
THE PHOTOGRAPHERS' ASSOCIATION OF MISSOURI . . . 235
TONING BROMIDE PRINTS . . . 238

OUR PICTURES:

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WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

VOL. XXXVII. MAY, 1900. No. 521.

HOW TO BE PHOTOGRAPHED.

AMONG the needs expressed by our correspondents, one of the most frequent is the call for help in making up a little studio booklet which, put into the hands of likely people, will attract business to the gallery. Such booklets usually consist of a friendly chat by the photographer, giving hints on how to dress, when to come, etc., illustrated by selected examples of the photographer's work. It should not be difficult for the intelligent photographer to construct such a booklet, and give it both individual interest and attractiveness. Wherever these booklets have been made and used they have invariably proved a very profitable advertisement.

Some time ago, on page 230 of our 1898 volume, we reprinted an excellent booklet of this sort, sent us by an Oregon photographer. It had been published in his local newspaper, and proved a good business bringer. Herewith, as supplementing the information there given, we reprint from the Denver *Sunday Post* of March 11th more useful information on this subject, likely to be helpful to photographers in making studio booklets for the new season.

The article here given was written by and published in co-operation with Messrs. Rose & Hopkins, an enterprising firm of portraitists in Denver, and was finely illustrated with choice examples of "how it should and should not be done." The contribution occupied a full page of the paper and was well printed in two colors. It ran as follows:

Everyone at some time or other, whether they want to or not, has to repress the natural modesty which would otherwise prevent them from having their features perpetuated, and submit themselves to the photographer.

Then "how to do it" is the question, and the perplexing problem of how to dress presents itself.

As a general rule, you should not think too much about dress. Too much worry and indecision and fuss will make you look unnatural. Put on your most becoming suit or frock, arrange your hair as you always wear it, and serenely submit yourself to the operator, at peace—above all things—with God and man.

As a general rule, the question of dress must be answered in a different way by each type of "sitter." To speak generally, the man built like the jack of clubs should not wear a sack coat buttoned tightly around his embonpoint and expect a graceful portrait of himself in a three-fourth-length profile. The man of Falstaffian figure should wear a well-fitting cutaway, or loose frock coat, since he cannot well array himself in the tunic belt of his prototype.

I spoke just now of types, and it is only in this general way that I can offer advice on the question of dress, for every woman has an individuality about her that must above all things be preserved in her portrait.

But let not the well-rounded matron with the full face and double chin invite apoplexy and an ungracious portrait of herself by wearing a high stiff collar. Such a comfortable figure demands something soft and easy, as a little lace, or—better than all—a decollette. Those who are tall and not too well clothed in flesh should copy Bernhardt, and soften the outlines of the shoulders and neck with something

soft and filmy. Don't have your portrait made when you are tired or worried. Have it made after a good night's rest, when the eyes are bright and the smile is cheery.

Do not go to the hairdresser to have your hair dressed in the manner which she thinks is most becoming to your style. It may be most becoming, but even so—it is not you, unless you always wear it so. Let it be done up neatly in the way you usually wear it. The chief charm in a portrait is likeness, the portrayal of personality.

Apropos of this, children are the most graceful and natural of subjects, and are blissfully unconscious of themselves, wherein they retain their personality.

Of course there are occasions when the dress is the important feature. For it must not be forgotten that the most important epochs of a woman's life are marked by special dresses. There is the first party dress, the subject of so much anxiety in the making and so much pride in the wearing. Then the first long dress. This must, of course, be shown in a full-length portrait, for what is more lovely than a young girl posed gracefully, showing her gown to best advantage. With Longfellow we see her

> "Standing with reluctant feet
> Where the brook and river meet
> Womanhood and childhood fleet."

Next the graduating gown must be photographed. It is white and dainty; its freshness should be marred by no jewelry. It is only natural that her friends should all want a portrait of her in this most charming of all dresses.

After the graduation our young lady makes her debut, and has innumerable evening, afternoon and street gowns, each of which has some association that must be perpetuated by photography.

Then comes the gown of all gowns, which marks the most important change of all in the life of the wearer. In this portrait the gown is the important point, all else is subservient to it, and this is where the artist is in his element, in draping the folds, in retaining the sheen and texture, and in bringing out all the details of its decorations, such as real lace, which perhaps may be an heirloom and has been worn by more than one bride in the family.

All colors and fabrics are good for photographic purposes, but pale colors, that blend with the light, like pink, blue and white, are particularly well suited to people who can wear them. Black is always the best color for stout persons. Soft fabrics, like velvet, lace, soft silk and wool, are particularly good for pictures, as they add to the softness of the features.

"How to dress" is an important question in photography, but it is the face that makes the portrait and—except in special cases—all considerations of dress must be secondary to that. If a gown is becoming to you at home, at a reception, or on the street, it will invariably look as becoming in a portrait.

To the dear old grandmother, sweet and sedate, who always comes under protest, and resignedly submits to the inevitable, for the sake of her children and grandchildren, I can offer no suggestion. We want her as she is, sitting with her book, or work—just plain grandma.

In photography a great deal depends upon the artist. He must be tactful, resourceful and of quick perception. He must make the subject feel at home immediately, as the dread of being photographed is universally experienced and can only be accounted for by the law of inheritance from ancestors who may have been photographed in the good old days of Daguerre or later by the wet-plate process.

Photography has advanced rapidly since then, and with quick-acting lenses and rapid plates it is only the question of a second's time to make a negative.

This inherited fear should be relegated to the garret of oblivion, with the stereotyped expression, "I would rather have a tooth pulled than to have a picture taken."

Everyone has a certain amount of beauty, and everyone has a certain grace. The photographer knows this, and it is his business to discover it and bring it out. If he does not, he is a failure. The photographer must discover charms whose existence is often not even suspected.

Then the artist should try to become acquainted with his subjects, and he should attempt to remove the restraint and embarrassment which nearly always exists between subject and operator.

Little incidents occur in the studio occasionally that make people feel per-

fectly at home, such as a little story, a happy expression, or such an instance as follows: While posing a group—a mother and three beautiful children, aged 4 months, 3 years and 5 years—the little man of 5 said, "The baby can't walk yet." I said in a surprised tone, "Why?" and he answered apologetically, "We haven't had him long enough." The result was a hearty laugh and a good photograph. Occasionally the story is told to the wrong person and the point is not appreciated. For instance, one of the medical profession was sitting for a photograph, and he looked severe to the point of solemnity. I thought I would cheer him up a little, and I told the story of the Irishman who went to the undertaker to buy a coffin for Pat. The undertaker said, "Is Pat dead?" The Irishman replied, "No, but the doctor said he'd die before mornin', and he knows what he gave him." It took me some time to square myself.

"The wonders of the nineteenth century" is a fruitful theme for writers of the present day, and doubtless it will continue to be for some time to come, and in none of the arts or sciences—with the possible exception of electricity—can these "wonders" be more fully illustrated (I use the word in a double sense) than by photography.

When the young Victoria was decked out in the gorgeous robes in which she was crowned Queen of England all the wealth of her vast possessions could not have purchased for her the pleasure which every young girl can now experience—that of having her pretty dress photographed.

It was in 1839 that the French Government voted Daguerre the sum of 6000 francs on condition that he allow his recently discovered process of making pictures by means of the sun's rays to be made public.

It would take a long time to sketch, in even the most rapid and cursory manner, the progress of this truly wonderful science since that time. Most of our readers have in their collection a few specimens of the old daguerreotypes. Just compare them with the finished products of our best studios of to-day, and you will then have a better idea of the wide difference between the old photography and the new than any words of ours can convey.

SOME PHOTOGRAPHIC DONT'S.

Don't—if you are a woman—"dress up" and "prink" until you look entirely unnatural.

Don't go to a hairdresser and have her do your hair as she thinks is most becoming to you. Do it yourself in the simple way you always wear it.

Don't select your prettiest gown to be photographed in, unless it also happens to be your most becoming gown, unless you want a picture of the gown itself.

Don't—if you are fat and have a double chin—wear a high, stiff collar.

Don't—if you are thin and bony—wear an evening gown.

Don't—if you are a man—go to a barber and have your hair newly cut and plastered to your head as if it didn't grow there.

Don't—if you are fat—wear too high a collar.

Don't—if you have a long, thin neck—wear an old fashioned turndown collar. Wear a collar that is as high as collars are made.

Don't—if you are fat—have a full-length profile view.

Don't go to be photographed when you are tired or ill or worried.

Don't let yourself get nervous over the process.

Don't think you have to hold your breath during the time of exposure.

Don't think you have to go to the photographer's on a bright day. A dull day is often much better than a bright one for photographic purposes.

Don't assume the air of a martyr and tell the photographer you would rather be electrocuted or have a tooth pulled

Don't insist on a particular pose unless the photographer says it becomes you. Remember the artist is always studying beauty, and knows your good and bad points better than you do.

We congratulate Messrs. Rose & Hopkins upon the happy way in which the article was prepared and placed before the public; they have our thanks, also, for permitting us to offer it to our readers.

TO THE PHOTOGRAPHERS OF AMERICA.

An artistic fellow photographer who is a successful business man and a regular attendant and contributor to conventions, told me that in his opinion the majority of photographers were not progressive. To do good work, save money and contribute to the Association when asked to do so, constitutes, according to this gentleman, some of the highest duties of the photographer.

The study of art by many of the craft is making a great change for the better in the work of to-day. It teaches us how to procure the effects we desire, and is as essential to the photographer of the present time as the study of photographic chemistry was to the photographer of the olden time.

To study carefully the exhibits at our next convention in Milwaukee, will be to take a long step toward mastering the great question of *How to Make Pictures.*

The first clause in the prize-list should convince you that this is the year to exhibit.

The changes made by eliminating the divisions, and having all the exhibits passed on by an examining board who will admit only work that is meritorious, will elevate the standard of convention exhibitions. Never before have you had such an interesting and instructive programme prepared for you. The lectures and demonstrations will be unusually interesting. Professor Beck, of the Cincinnati Academy of Fine Arts, will deliver two lectures, the first entitled, "What are the Principles of Beauty in Art;" the second, "Does Lighting Insure Art."

Professor Leyton, of the Milwaukee Art Museum, will deliver a lecture on the celebrated pictures in the gallery. Professor Griffith, of the Detroit Museum of Art, will be with us again with one of his beautiful and instructive talks. President Stein and the citizens of Milwaukee have made arrangements for your entertainment, and you will be kept busy.

Send an exhibit; even if you do not wish to compete it will be an honor to you to have your work admitted, and it will help make the convention of 1900 the greatest in the history of the Association.

Yours fraternally,

George M. Edmondson,

Second Vice-President P. A. of A.

A "HIGH-CLASS" OPENING.

When things are unsatisfactory, money scarce and sitters few, and we are thinking all sorts of discouraging things, then is the time that we look out for something new. We get it into our heads that photography has seen its best days, and that never again shall we make money. We meditate on the rush of half-trained and incompetent ones into the field, and wonder however our children will contrive to live. Some time ago one of our British contemporaries discussing this old, old question of lack of business, suggested a novel way of reaching that top of the tree which is never crowded. It was nothing else than a photo-mechanical process! And the process suggested was photogravure. On second thoughts the suggestion is quite a feasible one, not for a man of even average ability, but for the really capable man who is in the position, as most of us are at one time or another, of looking for an opening. There is in photogravure a means of reproduction well worthy the attention, too, of the amateur of leisure, and of artistic taste and education. The writer referred to says:

"At the present time it is still the fashion to mount many photographs after the manner of engravings, yet, withal, the pictures, except perhaps in the case of platinotypes, look very unlike engravings. Is there any reason, however, why veritable photogravure portraits should not be supplied by high-class photographers? For small numbers they would undoubtedly be more costly than platinotypes; but in the case of say two or three dozen, they would probably cost less, particularly when the expense of mounting is taken into consideration, and they would certainly command a much higher price. Of course, in throwing out this suggestion, we are supposing that the photographer will make

his own engraved plates. He can then either print from them himself, or get that part of the work executed by a regular copper-plate printer."

Photogravure is not by any means a difficult process to work, though it requires to be learnt and its little peculiarities surmounted, but they are really not so formidable as many surmise. Some amateurs have achieved great success with the process, and, if amateurs are so successful, why should not the more intelligent of the profession become equally so? The question must, however, be considered from a business point of view as to whether this style of picture would meet with greater favor with the more artistic and wealthier portion of the public than the present style of portraiture—silver and platinum prints for the orthodox album. If it did, there is no question that very much higher prices could be obtained than for even the highest-class ordinary photographs.

Nowadays when photographs are mounted for the folio or framed the photogravure would be quite in the fashion. To the worker who can create a demand for fifty or a hundred of one picture, the process would be feasible on the score of economy. It is quite permanent, and any color of print can be obtained and repeated with absolute accuracy.

We give the hint here not for the portraitist, but for the man who publishes his portraits or views and who yet keeps above the commercialism of large quantities. For the high-class portraitist the tendency seems to be from the "large editions" toward a few prints from several different negatives.

A REVERIE.

BY A. G. MARSHALL.

I HAVE just finished swallowing WILSON'S for April. All my art magazines I take in as a ruminant does his grass—stuff the whole thing in—timothy, clover, daisies, quack and thistles, and then chew over choice bits at convenient times of leisure. I read the table of contents and all the ads, often commencing with the front cover and ending with the back, taking in all the technical articles (unless too much higher mathematics happen to be involved) whether I ever expect to make use of them or not. I like to inspect other men's knowledge in lines outside as well as within my own province. I look at every picture, first to admire, next to analyze. If I have an hour the day a magazine arrives it is all bolted in that time, perhaps less. On other days I pick the book up again and turn to just what I seem to want at the time if it is there, and get as nearly as possible into the writer's point of view. If I want to disagree with him afterward I can do it much more squarely and fairly, too, for thus understanding him. And I find a curious phenomenon. In nine cases out of ten if I disagree with an honest writer it proves to be more with his mode of expression than the essence of what he wishes to express. And so it is with art in all its various phases. All are trying to express some aspect of truth or beauty, and the main elements of the everlasting quarrel on the subject are concerns of language, whether prose or poetry, catalogue or lyric, sing song or eloquence, is the best vehicle for this, that or the other subject.

What ails those photographer fellows, anyhow? Nice, pleasant men, every one of them, devoted heart and soul to making people "look pleasant," and feel so, no doubt; yet here they are hurling epithets and working up a state of things over the infallibility of the "old" and the "new" methods, and using such singular words as "freak" and "fake" and "old fogy" to characterize things and men they do not approve. Verily the "new" method in language is a stunner. I used to suppose "freak photography" meant something like printing a man's head on a monkey's body, or a fellow shaking hands with himself, a harmless and amusing manner of producing monstrosities and apparent impossibilities. And "faking" in photography I took to signify such practices as working off a cheap enlargement under the name and for the price of a fine crayon; or getting up bogus "spirit" photographs when the simon-pure celestial article was paid for. But now it seems that anything

but the "plain lighting" and sharp detail of the good old times is "freak" work, and anything done to a poor negative by way of help is "faking." Our dictionaries must be revised. It is the language that is at fault. The "freaks" and the "fogies" are both at work on the same beautiful image, but on opposite sides, and each seems to think his view the whole of the subject. Gentlemen, learn a "trick" of the painter (who, you know, is a consummate "fakir," and don't care a rap for nature if he can only whack out an "effect")—the painter gets off some distance from his work and takes an all around view quite frequently. And in this way he sometimes discovers more in his subject than he dreamed at first, even two or more sides, unless he chances to be copying merely from "the flat." It is just a sort of trick; all in looking at a thing; dead easy; ever so much simpler than inventing new applications of old words when one is out of humor.

Well, here is a name among the contributors this month to the symposium on "Old vs. New" that takes me back quite a stretch of time—W. W. Cowles, of Seneca Falls, who last year recalled himself to my memory with a lot of prints showing much artistic feeling and intelligence. Fifteen or sixteen years ago, in that delightful old town Canandaigua, where I had established myself, a young portrait painter trying to appear like an old one (now they try the other way), Cowles, then a "promising lad," as the story books say, was a member of a small class in drawing at my studio. He has not escaped the art instinct, a successful and artistic photographic career lies before him. Another member of that drawing class has won recognition in a different field. I refer to Frank Hutchins, the painter. At my summer school at Thousand Island Park there hangs an old pen sketch I made on an excursion with Hutchins and another pupil up the lake to Tichenor's Glen. Hutchins appears leaning, sketch-book in hand, against the rim of a thirty-foot water wheel. The other pupil who was along that time was A. C. Brace, who became a first-class photographer, was travelling demonstrater of Eastman papers and plates for several years, and is now in company with Messrs. Finley & Crandall, at Canandaigua, in the oldest photographic establishment in western New York, founded by the late Marshall Finley (one of the very salt of the earth), who was a pioneer daguerreotyper in the United States, and himself made the first daguerreotype he ever saw. He was a collodion man. With the advent of the dry plate he retired from the firm, leaving the "new" photography of that day to his sons. And by the way, Theodore Marceau was just beginning his professional career some eighteen years ago with a rival establishment in that same town. And over at Palmyra, working for Elton, was Leland T. Powers, who soon after learned to make faces in a much more profitable way as the greatest of character impersonators. And about that time Dr. Wilson was junketing in Egypt and Palestine, and making those wonderful photographs up the Nile, around the Jordan, and taking that thrilling trip into Arabia Petra. Several years later, while associated with my brother, C. P. Marshall, the Cazenovia camera artist, I became acquainted with Rev. Douglas P. Birnie, one of Dr. Wilson's companions in Egypt and Arabia, who had come to America, and was occupying the pulpit of the Presbyterian Church of Cazenovia. I had read Dr. Wilson's journey in the *Century Magazine*. Then Mr. Birnie gave me his version. Later, I became acquainted with Dr. Wilson, and heard many of his delightful reminiscences at first hand. Curious how things come about. One gets to know lots of fine people first and last. And there is a good point in every one of them that it is one's business to discover and see where it will help himself. Else what is the use of acquaintances. Exploiting other people's pockets is supposed to be the paying game, but exploiting their minds is a better one, and keeps a friend beside. So the "old" and the "new" men could much better give and take points than blows. And the sooner the sign reads "Fogy, Freak and Fake All Around Photographic Artists," the better it will be for all parties.

A HOME-MADE screen for orthochromatic work is made by fixing a plate which has been neither exposed nor developed. Wash it well, and then immerse in a saturated solution of picrate of ammonium. When dry it is ready for use.

GEORGE EASTMAN'S GENEROUS GIFT.

It is with great satisfaction that we spread the announcement that someone connected with our art has been enabled to do a generous deed which must result in great public good. What follows will explain. We quote from the Rochester *Post Express* of March 23d:

"The city of Rochester, and more particularly the Rochester Athenæum and Mechanics' Institute, is once more enriched by the munificent gift of one of its citizens. George Eastman, treasurer of the Eastman Kodak Company, has purchased the entire property bounded by the Erie Canal, Plymouth Avenue, Spring Street and Spring alley, upon which he will build a handsome new building for the uses of the Mechanics' Institute. The entire cost will be $200,000, and the building, when completed, will be turned over free of debt to the institution named."

Mr. Eastman's letter of presentation, followed by the acceptance of the board of directors is as follows:

"Rochester, N. Y., Feb. 20, 1900.

"L. P. Ross, Esq., President Rochester Athenæum and Mechanics' Institute, City:

"Dear Mr. Ross: In accordance with my conversation with you and Mr. Lomb I hereby propose to purchase, under the options which you have obtained, the property situated on the west side of Plymouth Avenue, extending from the canal to Spring Street, and back to the alley separating it from the property of the institute, providing the titles are satisfactory to Mr. Hubbell and possession can be procured by May 1, 1900, and to build thereon a building suitable for the uses of the institute; the whole to cost $200,000; and to turn the property over to the institute when completed free from incumbrance. If this proposition meets with the approval of your board please notify Mr. Hubbell, who is authorized to purchase the land.

"Yours truly,

"George Eastman."

As we have said, we take much pride and satisfaction (and we know the whole of our fraternity will join us in this) in knowing that anyone connected with our profession should be enabled by his prosperity and good heart to make such a noble donation for the public good. We confess to some little disappointment (and we don't want to feel selfish) that the gift could not have been made for the advancement of photographic knowledge more especially. But it is good as it is, and photography must be benefited with the rest.

From a later issue of the *Post Express* we gather the further information below:

"No announcement more agreeable to the people of Rochester could have been made than that of the splendid gift of George Eastman to the Mechanics' Institute. The $200,000 which he is to contribute for the purchase of certain land, and the construction of a fine building upon it, will place this institution on a footing with any of the kind in the country, and increase its power for usefulness manyfold. The city will become a centre of an education especially adapted to fit young men and women for the perfect mastery of the practical duties of life.

"But unexpected by the general public as his gift is, it seems natural and inevitable enough to the people who know him best. While he has been deeply absorbed in his own business, which has been phenomenally successful, he has always taken an interest in the welfare of the community where he has passed from a humble position to one of power and affluence. He has watched the growth of the Mechanics' Institute, and been delighted to see the beneficent influence it has exerted. It was not, therefore, surprising to his friends that at a time when the institution was in pressing need he should come to its rescue in the generous manner that he has.

"In doing so he has given another brilliant illustration of the trait that characterizes successful American business men. They are not content, as is often charged by the thoughtless, with simply accumulating a great fortune for their own personal benefit. It is not enough for them to provide honest toil for hundreds and thousands of their fellow-men, a work of the highest beneficence. For their own personal satisfaction they find it needful to share with them in a more direct way

the fruits of their marvellous business ability. Therefore, they use their fortune to found libraries, or universities, or institutes. But of this form of beneficence none confers a greater benefit on the community than such an institution as that which has become the recipient of Mr. Eastman's bounty.

"As we have already said, the institute prepares young men and women for the actual practical duties of life. When they have completed its courses of study they are put in a position to earn at once their livelihood, and to contribute to the wealth of the community where they live. Mr. Eastman's own career has enabled him to appreciate fully the importance of this kind of training."

We rejoice to spread this good news of the generosity of one so well and favorably known to our craft; all of us will watch the future of the enterprise projected by our generous colaborer. His name has become a household word with us. May the many whom he seeks to benefit in the future not fail to remember him with gratitude and esteem. The resolution of the board of directors of the Mechanics' Institute reads as follows:

On motion of Mr. Cromse it was unanimously resolved as follows:

"That President Ross be requested to express to George Eastman not only our hearty approval of his proposed purchase for and gift to the Rochester Athenæum and Mechanics' Institute, but our most sincere appreciation for his munificent act, reserving to some later time a more formal and fitting expression of our appreciation."

THE COMPOSITION OF A PICTURE.[1]

BY HY. J. DOBSON.

THE art, or I might say the knack, of composing a picture is a very important one, and is, to a great extent, a gift from nature. At the same time, like many other gifts, it can be cultivated by practice, as public speaking can be, and become comparatively easy to the student or artist.

Mr. Stacy Marks, R. A., in the course of an inaugural address to the students of the West London School of Art, in January, 1880, said: "The facilities for the cultivation and study of art had, within the last forty years, become so numerous that we were in danger of having too many painters of pictures. Everybody who had good eyesight could be taught how to paint and draw up to a certain point, but invention, feeling—all the qualities that go to make the painter as distinguished from the mere mechanist—could not be taught, but must be born. Our exhibitions, he grieved to say, were full of specious and bad pictures, painted by men who, with more humbleness of aim, might have been admirable art-workmen. Good art might be shown in a variety of ways, and the man who designed a good paperhanging, an effective piece of metal-work, or a good tile or pattern, was as much an artist, though in a lesser degree, as a painter or sculptor. It was much better to do a little thing thoroughly well than a great one badly, and he who could produce a well-designed chair or book-cover did more real service to art than he who painted an inferior picture."

Within the last thirty or forty years there has been a great change in regard to the treatment or method of composition. The old conventional lines have been to a great extent abandoned; and we find that newer methods have been adopted.

In landscape, for instance, we have the natural and truthful compositions of such works as those of John Constable, David Cox, Cecil Lawson and others, in direct contrast to or with the mechanical arrangements of some of the earlier English masters of this century, such as Wilson, Stansfield and others. Thomas Gainsborough was an exception, and broke away from conventionalism even in his day. There is no doubt that some of his best landscapes have had considerable influence on early British art during this century.

In regard to figure pictures, the change is even more noticeable. The somewhat hard and crude compositions of such artists as Benjamin West, Daniel Maclise, E. M.

[1] Reprinted from the Transactions of the Edinburgh Photographic Society.

Ward, and others of less note, have been gradually improved upon by the modern schools of painting.

The use of the lay figure was no doubt much to blame for the mechanical way in which these artists worked. In these days most pictures are painted from the living model, and hence we have a healthier state of matters.

The works of the greatest masters of this century are good examples of simplicity, truthfulness, and naturalness in composition. Breadth of effect, and balance in light and shade, are most predominant, while color is subdued and rich in quality. We all know the names of Millais, Burne-Jones, Tadema, Orchardson, Pettie, Luke Fildes, MacTaggart, Paul Chalmers and many others that I could mention. These men will, no doubt, rank amongst the leaders in figure painting toward the close of the nineteenth century. Some of the earlier masters of the English school, such as Sir David Wilkie. John Philip, Fred Walker, and George Mason, had influenced several of these artists, and it is to them that we owe much of the success of the more modern painters.

These works, along with those of Constable, Turner and others, will rank among the art treasures of the world, and will compare favorably with the masterpieces of the Continental schools. I cannot do better than commend the study of these masters' works to the student, either of art or photography. If you cannot get access to the original paintings, you will be able to see reproductions at any of the art galleries or free libraries.

There are many books published on the subject of composition, but in my opinion there is nothing like practice or observation for the amateur or student.

A lawyer friend of mine was anxious to learn skating, and informed me he was going to buy a book on the subject. I, of course, advised him to get a pair of skates and go to the ice, and learn by experience. The theory in anything is all very well, but unless it is put into practice, there will be no perfection.

An earnest student, either in painting or photography, will very soon pick up a lot of knowledge from diligent observation and continued practice in composition. If intelligence is applied to hard work, success is sure to come eventually, but patience is also required.

The black-and-white student, of course, may see a landscape or figure study quite in a different light from the artist, who is sometimes fascinated with the color rather than with the light and shade.

It is impossible to fix any rules on the subject of composing a picture with any degree of definiteness. Nothing but experience can really teach.

As far as my own imperfect knowledge goes, I shall endeavor to explain my own individual method, acquired by continued practice and observation within the last twenty years or so. I do not, however, suggest that my method should be adopted as perfect, but that it might be improved upon wherever possible, and if in accordance with the ideas of the student.

In the choosing of a subject direct from nature, it is most important that the best point be selected. It is therefore necessary that the student be not content until he has arranged the subject from which he can get the most pleasing and artistic results.

As a preliminary, a good way to focus a subject is to hold up one of the hands—but a little experience will soon educate the eye to grasp the best point of view. If it be painting, the student will soon learn what to omit or what to modify in the subject. On the other hand, if he be using the camera, his hands will be tied, although he can still insure that his subject is taken from the best point possible.

If care is taken to secure the best position either for painting or photography at the beginning, this will save much trouble and valuable time as well.

It often happens that a very slight movement, either to the right or left, will so change an object that that which was a defect from one point of view becomes a beauty from another, and *vice versâ*. I have also found in my own experience that a subject improves often after it is committed to paper or canvas, but I have also experienced the reverse. Therefore, although the search be somewhat tedious at first, it will save much trouble and even expense afterward, because there will be no wasted plates or unnecessary waste of paint, if the artist has thoroughly satisfied himself that he has secured the best point of view.

One of the most important things for a student to remember is, that he must not attempt too much. Beginners, both in painting and photography, are apt to overlook this, and to think that the more they can show in their picture the better it will be. This idea, of course, proceeds from the want of knowledge and experience, and, with a little practice carefully directed, it will soon become obvious that this idea is quite a mistake. All the best pictures, as I have pointed out to you, show simplicity of design, and, even where a panoramic view or large group of figures is painted, there is always one central object or figure to which all the rest of the picture is subdued or subordinated. In the painting of a portrait, for instance, it is always important that everything should be subordinate to the head.

One of the greatest difficulties the young student has to deal with at the commencement of his studies is to know what to put in and what to leave out of his picture. In painting, as I have said before, it will be found necessary sometimes to modify or even omit some parts of the subject altogether. A telegraph wire sometimes intrudes itself upon a picturesque street, and may spoil the beauty of it. In this case it is better to leave it out of the picture altogether.

Should the camera be in use, this will, of course, be impossible, but the student can still make sure that the picture is taken from the best point of view.

When I was a student at the Royal Scottish Academy I sometimes went out sketching with some of the older students, and can remember my early experiences. On one occasion, I remember we went to Newhaven, that favorite resort of Edinburgh artists, and found a subject out upon the pier. I was the youngest student there, and had done very little sketching from nature before, but my two companions were both pretty good painters. We had not worked long before we soon collected a crowd of boys and girls to watch us. This, of course, made me nervous, but my efforts were soon rewarded by our "would-be critics" remarking that *my* picture was the *best*. This, of course, I knew could never be the case, but my crude attempts were easier understood to these boys and girls than my student friends' work, which was too advanced for them to follow. And I have found, in my artistic career ever since, that the people who know most about art and pictures are the most sparing with their criticism. But to our subject.

If we examine a painting by a greater master, we will find that there is a balance in the composition. The eye instinctively travels to a certain part of the picture, and this is the spot to which the artist intended the spectator's eye to rest upon. The other parts of the picture are all there, but every part is subdued, and holds its place in relation to the most important part of the picture.

If, for instance, the subject be landscape with, say, trees, hills, and water, the trees will generally be the principal object, with reflections in the water, perhaps, and hills in the distance. If, however, the subject be a figure composition, the principal object will be the foreground figure or figures, and the middle distance and background will be subordinate to these. Take the well-known picture of *Napoleon on board the Bellerophon*, by W. Q. Orchardson, R.A., and you will see exactly what I mean. Napoleon is seen standing on the deck of the ship with folded arms in the foreground of the picture, while the officers are very cleverly and naturally grouped in the middle distance, while the eye is carried instinctively out of the picture to the sea and sky beyond.

The arrangement and composition of this picture, including the rich coloring for which Orchardson is so well known, all go to make this one of the greatest masterpieces of British art. It is satisfactory to know that this fine work of art has been secured by the Chantrey Bequest, and may be seen in the Tate Gallery in London. The picture has been etched, and copies can be seen at most of the printsellers'. I am sorry I have not been able to get a lantern slide of this picture to show you.

There are other well-known pictures, which I might refer to, as demonstrating what I mean as good examples of composition, but, instead of doing this, I will call your attention to a very popular picture by Luke Fildes, R.A., called *The Village Wedding*. This picture, though exceedingly clever in many qualities, is, in my opinion, what I would call a crowded composition, and is wanting in simplicity of arrangement and general effect.

It is one of Mr. Fildes' earlier works, and he is seen to much more advantage in his famous picture of *The Doctor*, so well known by the reproductions which are seen everywhere. Here we have another splendid example of a pathetic incident, simply but powerfully treated. I remember seeing this picture at the Royal Academy when it first appeared, and was very much struck with the sentiment which it conveys. This picture was awarded the centre position in the great room that year, about 1889 or 1890, and was deservedly very popular.

The nation is again fortunate in having possession of another great picture, the late Sir Henry Tate having presented it along with many others in his collection.

It was my intention to have a slide of this picture also as a good example of composition, but the copyright of most of these great pictures is strictly reserved, and it is a difficult matter sometimes to get permission. I have spoken of the arrangement in composing a picture, but the balance of light and shade is also very important to the success in making a picture.

If the subject be an out-door one, say on a gray day, of course there will be very little contrast or effect in light and shade, but under strong sunlight the same subject would be very different. It will, therefore, be evident that, if a picture is painted in sunlight, it will be much more difficult than on a gray day, although from a color point of view artists prefer the latter.

One of the greatest masters in light and shade, as well as color, is the famous Rembrandt, the founder of the Dutch school. No artist of any school has ever carried light and shade to the same perfection as Rembrandt, and most of us, no doubt, have heard professional photographers use the term "Rembrandt light and shade" for a photograph.

I may say that, personally, there is no other artist in the world appeals to me so much as this great master. Every time I go to the National Gallery in London I never fail to feast upon the works of Rembrandt.

The depth of color and breadth of effect, which give such power to his work are beyond all praise, and, so far as my art knowledge goes at present, he stands head and shoulders above any other painter the world has ever produced.

The modern schools of painting have all developed the influence of Rembrandt, but perhaps it is more evident amongst the modern French and Dutch schools than elsewhere. Joseph Israels, the Dutch painter, and G. P. Chalmers, R.S.A., were no doubt very much influenced by the works of Rembrandt.

In all the French ateliers there is very much stress put upon what the professors call "values," which means in this country "good tone." If a tree is darkened, or a foreground lightened, the painting will suffer or improve according to the tone or effect produced, but, when we find each object painted in relation to the whole effect, then we have "good tone," or, as the French term it, "values."

The modern "Impressionist School" depends almost entirely on "values" and light and shade, and this is just the other extreme of pre-Raphaelism, which paid no attention whatever to tone.

The modern Dutch painters are, perhaps, the best examples for good composition, color, and tone, all combined. Their works show a truthfulness to nature, combined with rare artistic merit.

I am pleased to say that the modern British school is also paying great attention to tone or values, and there is no doubt that art in this country, within the last thirty or forty years, has made rapid strides, but it is for posterity to decide how the work of to-day will compare with the old masters. A German critic says: "The British school is the progressive party in the history of modern art; the French and Germans are the conservatives." "English art had this advantage in playing a pioneering part, that it had no old traditions to stand in its way; it had no great past. In the sixteenth and seventeenth centuries England had been content to offer hospitality to Holbein and Van Dyck, and to collect the works of foreign masters in her galleries. Her art sprang into existence suddenly and unexpectedly at the beginning of the eighteenth century, and thence developed exclusively on native lines." The same writer says we British live in an age in which freedom has arisen. Our civil liberty affords us a sufficient foundation, and our liberty conducts us to the absolute verity in art. All beauty is truth; the search after truth leads you to nature. Truth is the mightiest

thing in the world, since it exercises sovereign rights over the creation of the imagination. The character of British painting is apparent. It proceeds from an intellectual impulse, not only does it strive after beauty of form and physical development of sensuous grace, but in the first place after intellectual expression and sentiment.

From these and such like remarks it will be readily understood that this nation takes a prominent place in the art history of the world.

Let us who are still students aim at high ideals, so that we may be worthy successors of those who have gone before. We may not all be successful, but, if we have cultivated our talents to the best advantage, we will have the satisfaction of knowing that we have done our duty.

PLATINOTYPE TONING.

BY PRESCOTT ADAMSON.

[A paper read at the February meeting of the Photographic Society of Philadelphia.]

THE fact that black undeveloped platinotype paper can be toned sepia by simple development is probably well known to many workers of this paper. One of the advantages of the carbon process is the fact that any colored tissue may be used with the same facility. Still, in the platinotype process, many, in fact about all the colors we desire may be obtained by toning. It would make this article too long to take up every possible color, and I have therefore considered only those that will be of general use. These are various shades of sepia, brown and red.

The sepia tone is produced by developing in the bath for the black paper, to which mercuric chloride has been added. The two solutions needed are, first, the usual platinotype developing salt, dissolved in 50 ounces of water; and second, a solution of 1 part of bichloride of mercury in 25 parts of water. On account of the varying solubility of this reagent, it is very inadvisable to use a saturated solution. This is mentioned, as some formulæ have been published giving a saturated solution of this salt, but as it is soluble in 3 parts of boiling water, and in 16 to 19 parts of cold water, you will see that a saturated solution is rather an unknown quantity. It is so with all salts, unless the temperature is given.

One part of this mercury solution is mixed with 8 parts of the developer, and the bath is ready. The print is floated and developed in the regular way, and then placed in a hydrochloric acid bath, made by diluting the usual bath (1 part of acid, s. g. 1.16, to 60 parts of water) with 4 parts of water, making a bath of 1 to 300. On testing the wash waters it was found, after three washings in this strength of acid, all the iron had been removed. Should you wish to test for iron, the ferrocyanide of potassium should be used, for while it is true that light reduces some of the iron to a ferrous salt, yet I found most of it in the ferric state; and the ferrocyanide and not the ferricyanide is the reagent.

Should an acid bath of the usual strength be taken it will cause the tone to rapidly fade out. One of the experiments with this toning is shown, the five prints, all printed to the same depth and mounted with the actinometer proofs, being on one card.

The first is developed without mercury; the second with 1 part of the mercury solution to 32 parts platinotype developer; third, 1 part to 18; fourth, 1 part to 12; and fifth, 1 part to 8, this latter being the correct amount.

This experiment is shown, not only for the tones produced, but it indicates how a rather flatly made print, whether overprinted or from other causes, can be made to look well, as the process seems to counteract flatness. This, in itself, is a good point, without regard to the color of the print. You will notice that the first weak additions of the mercury produce a muddy appearance in the prints, but when the proportions are correct this clears up entirely.

The question has been asked, "Is this color permanent?" I think it is. I have one print that has been subjected to daylight for a long time. It was framed and

hung near a window for three years, and although the wall paper around the frame shows signs of fading no difference could be seen in the tone of the print.

The question may also be asked, "Why not use the sepia platinotype paper, and not tone?" The effects produced by the two processes are not alike, and we are able to produce any shade, with much less effort by the toning method; and also, if the sepia is not entirely satisfactory, the toning can be continued into a deeper sepia, brown or red, by uranium. Before taking up local toning with mercury we will consider the uranium bath.

This bath is generally used in connection with the mercury toning just described. However, a black print can be toned to a sepia brown or red by simply immersing it in the uranium bath, but the toning is very slow. The prints we have were so toned, and were in the bath for about one hour. They had been black platinotypes, developed some months before the toning took place.

The best way to use this bath is to develop the exposed print in the oxalate developer, to which is added only half the strength of mercury that is used for sepia toning. By this development it acquires a faint sepia, being then well washed in the weak acid bath, and later in water. It is then toned in the following bath:

Ten per cent. Solution Uranium Nitrate	2 drachms.
Ten per cent. Solution Ferricyanide of Potassium	2 drachms.
Acetic Acid	1 drachm.
Water	10 ounces.

The tone will go into a deeper sepia and various shades of brown and red. Almost any shade desired can be obtained, this toning being fairly rapid.

I would urge that no one put his hands in these toning solutions. This applies to both the mercury and the uranium baths, for they are both extremely poisonous, and attack the skin. I found that one hand protected with rubber finger-stalls was ample protection, and there is no necessity for these solutions touching the hands.

We now come to local toning. The local toning in itself is very easily accomplished, but when one tries to combine two colors harmoniously it will require, first, that the negative be of such a character as lends itself to two colors, and you will find very careful selection is necessary, for not many do this. This is really the most important point in local toning.

Second, the graduation of the two colors must be well balanced, so they merge one into the other. Try to paint a water color in but two colors, and you will appreciate the difficulty encountered in this work. If the two colors do not harmonize, and good taste is not exercised, the result is entirely without artistic value. But this toning has a future for those who will work at it from an artistic stand-point. One method is as follows: The undeveloped print is covered over entirely with a thin coating of glycerine, well rubbed in, and the surplus removed by a blotter. When the coating of glycerine is perfectly even a brush is dipped in a mixture of equal parts of glycerine and the mercury developer. Almost all of this must be removed from the brush, leaving only sufficient to work with, as there is no way of doing good work with a surplus on the brush. The portions to be toned are brushed carefully until the image appears, at which point it is quickly plunged into the black developer, and all portions, except the brush work, will come up in black. It is well to go over the surface with a wad of cotton, while in the bath, to insure even toning. It is then washed in a weak acid bath, and finally in water. Another method of brush development is to cover over with glycerine all the parts of the print which are to remain black, leaving those parts which are to be toned sepia entirely free from glycerine. The uncovered parts are then filled in with the same mixture as above, the rest of the process being the same as before stated. This tends toward less liability of making errors in the location of the sepia tone, and by having a blotter constantly at hand one can easily prevent the tone extending where not wanted.

Now, it is not necessary that this local application of the mercury developer should produce the correct tone. It is only necessary that it be applied where the tone is needed. Should the tone not be what is wanted, or should it fade in a too strong acid bath, the correct tone can be readily obtained by using the uranium bath. This will not only give the mercury sepia color, but it will also give any deeper shade re-

quired. Some of the prints here were left in the acid bath until of an even black all over, but they immediately took the sepia locally when placed in the uranium bath.

The brush used for this mercury toning must not be used when black tones are required.

To produce the local uranium tone, after completing the above work the print is immersed in the uranium bath, and the portions covered with mercury will soon tone to the color desired. Should it be too deep, a weak solution of sodium carbonate will reduce the color, but a little acetic acid should be added to the wash water if soda is used. In fact, as the water is usually alkaline, it is a very good idea to always use a little acetic acid in the washing, for an alkaline water will soon wash out the color.

There is also another way, which, however, can only be used with certain prints; but where it can be used I think it is one of the most satisfactory means of producing local toning. It refers mostly to portrait work, and might be called selective toning. The negative should have almost clear glass for the blacks, that is, in portrait work the background and drapery should be black.

When a print made from such a negative is immersed in the mercury developer the deep blacks develop black, while the face and any light color appear sepia, thus giving the effect of two colors on one print. The result is really usually more harmonious than that obtained by the glycerine method. Some prints are shown, developed in this manner, both by mercury and by mercury and uranium. The latter tone is obtained by simply placing the mercury toned print in the uranium bath.

You will note that the methods of control differ in the mercury and in the uranium baths. In the former the color is decided by the amount of mercury added, and not by the time of development. In the uranium bath, however, the print remains in the solution until it has acquired the proper tone. I would call attention to the fact that this uranium toning is really an intensification of the print, and produces a stronger effect than the original black tone. Where the print is too weak this is a decided advantage.

Should you wish the mercury tone reduced a strong hydrochloric acid bath will do it; and to remove the uranium tone a weak solution of sodium carbonate is used. Some effects in local toning can be obtained by this latter method.

A word about the effect of reduction on the platinum image may not be out of place. A pure black platinotype, without mercury, can be reduced and intensified repeatedly in the uranium bath, without producing any effect on the reduced platinum in the image. Nitromuriatic acid is probably the only reagent that will affect the platinum image, and it destroys the paper at the same time. But when we combine the mercury with the platinum, and intensify with uranium, the ferricyanide in the bath is converted to ferrocyanide, and it combines with the mercury uranium and platinum to form ferrocyanides of these bases, wherefore the whole image can be removed in a strong alkali. I have cleared off the platinum image entirely by this means, and this is the reason a weak alkali is recommended above.

I feel no diffidence in advocating a process that can be of such use to platinotype workers. Its advantages may be summed up as follows: First, we can change the color of our platinotype to the shade that seems most in keeping with the qualities of the picture. Second, if the color we obtain is not what we wished for, it can be reduced or intensified at our pleasure. Third, we can take a print from a flat negative and develop it to a much stronger looking print than would be obtained in the black. And lastly, we can tone the same print to many shades by purely chemical means, thus placing a power in our hands not available in the one-color print.

BE cheerful and bright before your sitters, and be active. Nothing is so depressing to a subject as a slouchy, careless, swaggering operator.

GLYCERINE is a splendid thing to keep on the stoppers of bottles; it prevents them from becoming tightened. If, however, you have a tight stopper in your bottle, send a little glycerine around the top, with the message to loosen things, and it will do. Glycerine is worth its weight in gold in the dark-room, and should be always kept on hand.

ENGRAVING METHODS.

In a recent lecture on the subject of engraving Mr. J. Craig Annan gives some interesting particulars and definitions of a class of work of which many photographers have somewhat hazy notions. Defining engraving as the incising of designs on any hard substance, he describes the various methods—wood engraving, line engraving, mezzotint, etching, etc. The processes, he says, fall into two classes: First, relief engraving, embracing woodcuts in black line and woodcuts in white line; and, second, intaglio, embracing line or steel engraving, stipple, etching, dry-point, mezzotint, and aquatint. In relief engraving the processes he pointed out were the same, the difference lying in the manner of cutting. The black line was the earlier. A piece of boxwood, cherry, pear-tree, or other wood of close texture being obtained, cut to about an inch thick, and the surface levelled and polished, the design was drawn upon the surface in black ink, after which the uninked surface was slowly cut or gouged out—a laborious process. Executed with a variety of small sharp chisels, considerable practice was necessary to avoid cutting away any part of the design. When completed a hard roller charged with ink was passed over the surface, a sheet of paper pressed upon it, and the engraving produced. The course of woodcut engraving was traced from its "rediscovery" in the fifteenth century, and credit given to Durer as the first to raise the craft to the dignity of an art. From Durer to Thomas Bewick, who may be classed as a modern, wood engraving remained much the same. Within the nineteenth century the process has become a great art industry, revolutionizing illustration, and has declined—probably never to revive — before the cheaper, cruder, but more precise and easily made block of the photo-engraver.

Turning next to the intaglio processes, he remarked that all were alike in this—that the picture, instead of being printed from the surface of the ridges, as in a woodcut, was printed from the hollows between the ridges. A diagram made the point quite clear. The worker, by an intaglio process, took a sheet of soft metal, generally copper, and cut the design upon it with a graver or burin. To print the plate, the whole surface was covered with a thick ink well rubbed into the hollows; then the surface was carefully wiped. A piece of soft paper was next laid upon the plate, and subjected to heavy pressure, the result being the transference of the ink in the hollows of the plate to the surface of the paper. In the woodcut the blackness of the lines depended on the width of the lines only, but in the intaglio engraving the blackness of the lines depended on the depth of the incisions.

Line engraving was discovered, rather than invented, by a Florentine goldsmith, Tomaso Finiguena. The niello was a little silver or gold plate on which an ornamental or pictorial design was cut, and the hollows being filled up with some black material to show up the design, they were inserted as embellishments in miniature portable shrines and other pieces of ornamental metal work. Finiguena tested the progress of his work by filling up his engraving with soft black color and pressing a piece of soft white wax against it, when the color became transferred to the wax, and exhibited the design. One day it occurred to him that there was a value in the process other than his temporary one, and so he discovered line engraving by substituting printing ink for his dry color and soft paper for the wax.

Touching upon stipple engraving, he explained it as the method in which, instead of cutting continuous lines, as in line engraving, little circular dots or holes were cut. It was frequently used for small book plates, and attained its greatest influence with Bartolozzi, the process lending itself to prettiness.

Mezzotint, Mr. Annan defined as a negative process, as the engraver worked out the whites of the plate instead of cutting out the blacks. Obtaining a perfectly polished plate of copper or steel, he roughened the entire surface until it presented the appearance of a fine file, by means of an instrument called a cradle or rocker—a steel blade like a joiner's chisel, but shorter and broader, and with the edge slightly rounded. The rocker was used in sixty or eighty different directions across the plate,

until not a single speck of the surface remained unroughened. The picture was produced by scraping away the roughness on the portions which were to print white, the intermediate tones being produced by partial scraping. Mezzotint's principal artistic quality was its realization of a deep velvety blackness and a delicious softness in the half-tones, which was very delightful. But interesting though mezzotint was, there yet remained the most fascinating of the intaglio processes—etching. This process, easily learned, had always had the greatest attraction for the artist. In spite of its simplicity, the most exquisite black and white work had been produced by it. It was so sensitive and sympathetic that the most subtle working of the artist's mind could be made to appear in his work; but it was equally true that it required an artist of great imagination and poetic instinct to produce an etching of real value. Procuring a polished metal plate, generally of copper, covered with an etching ground—a kind of soft varnish to protect it from the nitric acid, the etcher proceeded to scratch his design or picture upon, or, rather, through, the varnish with an etching needle—a darning needle fixed in a wooden handle making an excellent tool. To insure the penetration of the varnish it was generally black in color, to show the metal below. By immersing the plate in the acid bath the metal was "bitten" away where it had been exposed by the needle. In the course of ten minutes a line or groove about the thickness of a fine hair would be "bitten." The plate was then taken out, washed and dried, and the more delicate portions painted with a resist varnish to prevent further biting in the acid bath, this process being repeated as often as deemed necessary. Freedom was the leading feature of the process. By no other could so fine a line be drawn, and that being so, beauty of line was the first thing to seek in etching, and then beauty of composition.

PRACTICAL METHODS AND FORMULÆ.

NEGATIVE VARNISH.—Herr Rottmann suggests, in the *Allgemeine Photographen Zeitung*, the following varnish, which, he states, is very cheap and good: 500 parts of alcohol are freed from water by shaking up with potassium carbonate every quarter of an hour for twelve hours and then decanting the alcohol from the water-soaked potash, which sinks to the bottom of the bottle or jar. To the spirit add 60 parts of sandarac and 20 parts of Venice turpentine; allow to stand for several days and filter, and it is ready for use. The negative has to be warmed before applying the varnish.

BLACKENING IRON AND STEEL.—To give a matt black coating to iron and steel, according to the *Revue Suisse*, the objects, well cleaned, should be immersed or painted with a mixture of:

Mercuric Chloride . . .	4 parts.
Cupric Chloride . . .	2 "
Hydrochloric Acid . . .	12 "
Alcohol	10 "
Water	100 "

They should then be dried, and allowed to hang for half an hour in boiling water. If the color is not dark enough the operation may be repeated.

C. H. BOTHAMLEY, who takes as careful note of developing matters as any man living, makes some interesting comparisons between adurol and hydroquinone. Adurol will work satisfactorily with carbonate or sulphite, when hydroquinone needs the stronger caustic alkali. Adurol works satisfactorily in cold weather, adurol is not given to quick discoloration, and finally, adurol is not too sensitive to slight variations in the amount of bromide.

To rub down a negative which is too dense, or halated, in patches, draw a piece of soft wash-leather over the tip of the finger, and moisten it with alcohol or wood alcohol. Rub the moist leather vigorously over the spot to be reduced.

A PYROCATECHIN DEVELOPER for Velox paper is: (1) pyrocatechin, 10 grains; sodium sulphite (crystals), 12 grains; water, 1 ounce; (2) sodium carbonate, 50 grains; water, 1 ounce; for use take 3 parts of No. 1 to 1 part of No. 2.

EDNA MAY

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OUR PICTURES.

THE frontispiece, and two other of our pictures this month, re introduce an old friend of the MAGAZINE and a clever portraitist, of whom the fraternity has heard little of late years. Mr. Philip S. Ryder, of Syracuse, N. Y., to whom we refer, has always ranked high in his profession, and formerly took an active part in its public life; latterly he has devoted himself more closely to his art. Hearing of the fame of his portraits of Miss Edna May, the actress, we took the opportunity to ask him to permit us to present a few examples of his recent work. In response he sent us the sturdy lad which we have used for our frontispiece; a fine 11 x 14 portrait of Miss Edna May, given as an engraved inset; and other pictures which we hope to present in a later issue. Enclosed with the pictures was the accompanying group of Mr. Ryder and his brother, Mr. J. F. Ryder, of Cleveland, Ohio. We are sure that our older readers will be glad to see this group, which recalls many memories of days when the brothers Ryder were foremost in the movements undertaken for the good of the fraternity. Personally, we are glad to see that Mr. Ryder has lost none of his old-time skill under the skylight. The picture "Ready for Fun" is typical of his work—bold, effective and of fine qualities. His portrait of Miss Edna May, familiar to the theatre-going public here and abroad as the *Salvation Lassie* in *The Belle of New York*, is generally conceded to be the best of the hundreds of pictures made of this charming impersonator by many famous American and British photographers.

The little group sent by Mr. L. V. Kupper came with the landscapes given on other pages of this issue, and we engrave it as one of the best examples of portraiture received since the year began. Mr. Kupper had an admittedly difficult subject, and he has handled it in a masterly way, in line and light and shade, as well as in the more difficult detail of expression. The rendering of flesh in the old lady's face is admirable, and we congratulate him upon his success.

PHILIP S. AND JAMES F. RYDER.

In our other illustrations several interesting branches of work are represented, and as far as possible we have endeavored to show how the photographer may take up these special lines with pleasure and profit.

THERE are photographers who can tell you who is the best manufacturer of lenses, but have not the least idea how to produce a good picture with any kind, for they will never allow themselves to be taught.

BE frank and honest with yourself. If you really do not know how to go on with your work, do not be ashamed to ask for information.

LETTERS TO JACK—AND THINGS OLD AND NEW.

V.

My Dear Jack: It was a great pleasure to me to see you walk into my office last week. I think it would do any Boston man good to come to New York once in a while. I notice some marked changes in you as a photographic model. Your front hair has greatly receded since I last saw you and seems to have materialized more on your upper lip. The *color* of the hair has changed; for on your head it was once nearly black, while now your moustache is "fiery red." The shadows under your cheek-bones and elsewhere have deepened, and certain changes marked in your expression cause me to think your face all over again as a model. You require more careful lighting now than you did five years ago—but so do we all. Nevertheless, I was glad to see you. You always interest me. Your bump of self-conceit seems to have swollen some, and that of curiosity undoubtedly continues. All this is good. I advised it.

Was it not a great privilege to go and see our amiable friend Mr. Falk in his new studio, and to examine all the fine things he has there, detailed in our April Magazine? When Mr. Falk showed us "the last picture" he had made and we studied it together, I could see how your mind was working and how your ruling passion for asking questions was getting up to a focus. And then you said: "Tell me: who made the first portrait? Here is the last one made, and it is superb. Who made the first one, and was it as good as this?" Thus you went on, speculatively, and I meekly promised to find you an answer to the first part of your question. Here follow the facts:

Many centuries ago, about 146 B. C., the fair daughter of Butodes, a potter, was seated in her home bidding farewell to her lover, who was a sailor about to depart for a voyage into foreign lands. Upon the wall of the paternal palace was cast the shadowed profile of the young lover. The outline of this the young lady drew upon the wall. Her father filled it in with clay and baked it. When lo! a fine portrait was produced, and from the points suggested by it grew the art of sculpture.

At about the same period (first to second century) the art of painting upon wood was practised by the Greeks. Many examples of their work have been found buried in the sand and in tombs in Egypt. A photograph of one of these paintings was recently sent to me by my valued old friend Emil Brugsch Bey, of Cairo, and I have had it half-toned to show you. The original painting is on wood and is now in the museum of antiquities at Gizeh, where Brugsch Bey is employed. The photograph was made by him. The print I have is 8 x 10 inches in size, and the half-tone was made by the Empire Engraving Co., Albany, N. Y , about two thousand years after the portrait was found. The original was discovered with many others in Fayoum, a district southwest of Cairo, where also the very earliest data in the history of the Greek alphabet were found.

It is a great curiosity, and is undoubtedly one of the very first portraits ever painted. The original is painted upon wood. The eyes are enamel and are ingeniously inserted in place. Is it not a study? The portrait is that of a Greek gentleman. When two such "joined" each other, history tells us that, "then was the tug of war."

Undoubtedly this was so. What eyes! What warlike character we see in that face! Turn to page 82 of *How to Enjoy Pictures*, and analyze this portrait with the chapter on "Portraits" well in mind. There you will get help to understand this first picture better.

I believe I have answered your question.

The technique of the portrait before us does not fall in with the ideas of either the "old" or the "new," does it?

Yet it is by no means a "freak," though so very "old."

Those antique artists had to stumble over a good many things before they could produce what they called "likenesses." Early in their day they did not paint the eyes of their portraits, but hired them made of enamel by the potter and inserted them

(as the dentist now does teeth). Then the sculptor sometimes added wings (of wax) to his subject. These were soft and pretty as works of art, but too soft, and useless as wings. After the use of wings was dropped the proper draping of the subject was considered, and we find the sculptor dressing his figures like dolls, or as the images of the Virgin Mary are draped seen in the churches of the Roman Catholics. Then, perhaps, before all this, the antique sculptor seemed to despair after he had finished the limbs and the torso, and added the head of a horse, or sometimes to the head and bust of a female the body of a fish was added. Thus we have our warrant for the mermaid, the centaur, and other strange figures. Compare all these with the last picture you saw Mr. Falk make, and you will agree that photography is not such a bad art, after all, if we have had to stumble up to our present height.

From a painting on wood (about the first century) found in Fayoum, Egypt. Photo. by Emil Brugsch Bey.

In those dear old first days of picture-making there was more intelligent effort made to secure the best results than there is with the average photographer now, if we may agree with Mr. Walter B Swift in his excellent article on "The Chance Picture at the Philadelphia Salon of 1899" (our April number, page 102). I was very much impressed by Mr. Swift's statements. We all want to "place the progress of this new fine art above all other possible considerations," and leave nothing to "chance." What Mr. Swift declares is true, viz:

"Medals should be a recognition of personal ability, and a chance picture is nothing but mere sham; while the awarder of prizes to such without investigation is distributing unearned honors to those likely to be found unskilled in artistic treatment, unappreciative of beauty in nature or anywhere else, and surely uninitiated into the subtle effects of lights and lines—honors due only to that rare mind which, perhaps, after a hard-fought struggle, slow artistic growth, and long years of arduous thinking, has finally gained the new power to materialize his imagination in pictures, and constantly lives in thought within that fascinating, ennobling, and educating upper world of art."

A few years ago the manufacturers of dry plates and paper worked by "chance" as much as the photographer does now. I remember how hard it used to be when we were trying to switch off from the use of collodion to dry plates, and from albumen to printing-out papers, to get stock of uniform quality. I once asked a noted maker of dry plates if he could produce the same quality of plates twice alike, and if I found a brand I liked and could work with success, if I could depend upon getting the same again and again? He demurred when he answered, and only then began to realize that if he made a batch of good plates it was only by "chance"—he could not tell how, because he kept no note of his formula, every lot was an experiment—a "chance"—the result uncertain. Eventually it dawned upon him to always make a memorandum of the formula he used. Then "brands" were advertised,

and we began to see more light toward uniform results. There is no need for "*chance*" pictures. The artist should *know the reason why* his results are good and not be like the common tramp, who "grasps the skirts of happy chance and breasts the blows of circumstance."[1]

All honor to Mr. Swift, who, though "only an amateur," has given us all a good lesson in true art.

You bring me from the studio now to the printing-room by your next question. You say you "cannot see why we may not as well fix our prints with water alone as to use that nasty hypo." Well, there you are: another example of "not knowing the reason why." If you will refer to page 155 of your copy of *Wilson's Cyclopædic Photography* you will observe that a great many people (and evidently you) do not seem to understand exactly what "fixing" means. When we say we "fix" a thing, we *generally* mean that we have *fastened* it by some substantial, material means. We mean *more* than that in photography, and we do more than that when we "fix." The proper term to use is clearing.

"Water alone" *was* used for fixing paper prints very early in the life of positive printing, but the salts of silver were not used as the sensitizing agent. The process was the discovery of Mungo Ponton, one of the earliest experimenters in our art. Ponton describes his method as follows:

"Paper is saturated with a solution of chromate of potash, and is thus made sensitive to the rays of the sun. After the desired object is printed upon such paper, the image is yet fugitive, but to fix it it is sufficient to plunge the films in water, whereupon all parts of the salt that were not touched by the light are quickly dissolved, while those on which the light could operate are perfectly fixed on the paper." Many processes have been based on this discovery of Ponton, as "Leaf printing," "blue" printing, the carbon process, and so on. So you see, Jack, *water* has been a good friend in fixing photography where its name stands inscribed, *i. e.*, high up on the lofty obelisk of Fame. Adieu.

Truly yours,

EDWARD L. WILSON.

ART IN THE ATLANTIC MONTHLY.

THE present volume of the *Atlantic Monthly* (Houghton, Mifflin & Co., publishers, Boston, $4.00 a year, 35 cents a copy) holds more than usual interest for photographers and artists. The Contributors' Club in the April *Atlantic* contains three papers on Ruskin; the first being recollections of him; the second considering him as a lecturer; and the third, evidently from the pen of Canon H. D. Rawnsley, relating his organization of "the Hinksey Diggers" at Oxford.

Beginning with the January number Mr. William James Stillman, the noted artist and traveller, contributes his autobiography, which is exceedingly interesting reading and very instructive.

Our older readers will remember that in the earliest years of our MAGAZINE Mr. Stillman was one of our valued contributors, and that he was for several years a regular contributor to Mosaics. He has long used the camera as a helper in his researches among the antiquities of Greece, etc., and in his pursuit of art. His work "On the Track of Ulysses" is a charming bit of reading. His autobiography sounds like a romance.

In the April *Atlantic* Mr. Stillman takes the readers of his autobiography across the ocean to Paris, whither he went to study art while awaiting a never-to-be-realized summons from Kossuth to aid in a Hungarian rebellion. He graphically sketches and comments upon the leading artists of the day—Rousseau, Corot, Millet, Delacroix and others. Returning home he describes his art life and camp experiences in the Adirondacks, with a vivid account of the strange "woods madness," and also of his remarkable spirit visions and sense of an occult guidance.

FURNISH your reception-rooms as elegantly as you can afford, and keep them as clean and as well attended as possible.

[1] Tennyson, in "In Memoriam."

WHO WILL WIN THEM?

THE accompanying illustrations show two prizes which will be awarded at the forthcoming National Convention of the P. A. of A., at Milwaukee, next July. Such information as we have concerning them appears below each set of engravings. A letter to the craft from Vice-President Edmondson appears on another page. We congratulate the National Association Executive upon the choice of these two fine bronzes; they are an improvement over those offered in past years, and should excite keen competition. Who will win them? Let every ambitious

GRAND GENRE PRIZE. P. A. OF A. CONVENTION.
Bronze figure, entitled "The Flight." 12 inches in height.
This figure took the first prize at the Academie des Beaux Arts, at Vienna, in 1899.

GRAND PORTRAIT PRIZE. P. A. OF A. CONVENTION.
Bronze bust, entitled "Youth." 24 inches in height.

reader consult the conditions governing competitors in the *Grand Portrait* and *Grand Genre* classes, given on page 56 of our February issue, and then strive, might and main, to secure the award in one class or the other.

THE PHOTOGRAPHER AND THE SCHOOLS.

THE KINDERGARTEN I.
From a photograph by Pach Bros., New York.

WE have no intention of discussing here the various "schools" of work, "old" or "new," to which all photographers are supposed to belong. The schools to which we desire to draw the attention of our readers are those wherein our children spend the early part of their lives, beginning with the kindergarten and ending with the university. It would be as difficult to find a town or village without its school as it would be difficult to find a settlement without its photographer. They are alike universal, but there is often no relation between them. This is the point to which we would call attention. There is, or should be, a close relation between photography and the school, and wherever the photographer has an eye to business his local schools should prove a profitable corner of his field of business.

In the first place the attractiveness of pictures of children at school, especially in kindergarten classes, is such that the photographer should see to it that he has an opportunity to make photographs of the local school life several times a year. This can generally be arranged with the school principals with little difficulty. The pictures will prove profitable show prints, and as advertisements alone will prove well worth what it may cost to get them. In the second place, such pictures may be relied upon as quick and easy "sellers." The parents of every child represented will not be content till they possess a copy for themselves. If a child is shown in several pictures, as at play, in the kindergarten, or in a general group, the demand will, of course, extend to copies of each. And, in the third place,

THE DRAWING-CLASS IN A PUBLIC SCHOOL.
From a photograph by Pach Bros., New York.

in his work with the children of his town the photographer is brought into close relation to the parents, and so gains access to his fellow-townspeople by the best of introductions. It is not necessary to enlarge upon the opportunities for business

THE NATURAL HISTORY KINDERGARTEN.
From a photograph by Pach Bros., New York.

which would naturally result from this intercourse, or of the separate sittings which might be arranged. The opening for a certain amount of "safe" speculative work is also obvious. The opportunity to secure pictures of special groups or models for pictures which could be profitably published is another feature which only needs to be suggested. And the hold which the photographer would have upon the rising generation of "likely sitters" would, in a few years, abundantly prove the wisdom of cultivating the special field represented by the schools of the town.

These thoughts were suggested to us recently upon looking over a marvellously interesting collection of pictures taken in the schools of New York City, for the educational exhibit at the Paris Exhibition. The work of making this collection, which included several hundred photographs, many of them large size, was entrusted to several local photographers. Messrs. Pach Bros., of 935 Broadway, had charge of the schools of Manhattan and Bronx, and how well they accomplished their work is seen in the three examples illustrating this note. The collection made by Pach Bros. exceeded 100 negatives, almost all of them equal in quality and interest to these here shown, which we selected at random. These pictures, apart from their use at the Paris Exposition, have had a large sale among people all over the country interested in education and the training of children. They have also been much sought after by the public press, and the advertising Messrs. Pach Bros. have received from them must have served to make them very widely known as skilful photographers. We are glad to be able, by their courtesy, to give our readers such a forcible reminder of the fact that the school photography of every town is worthy of more diligent cultivation than it has yet received from photographers. In a month or so the schools will close for the long vacation. The photographer who takes time by the forelock can yet make the year more profitable by securing as much work as possible among the schools and colleges of his locality. Begin to-day. See the principals, survey the field, and start the work. Have the finished prints ready for graduation week; make a big display of your school pictures and prepare a reasonable amount of stock for sale at the time of display. Invite the public of your town to come and see your pictures of the children; and when they come, see to it that they get the best possible impression of your work and workplace. If the thing is properly thought out and carried through, you will find that it will give a new impetus to business, bringing in its train new friends and a larger patronage. But it should be looked after without delay.

PAPERS FOR PROFESSIONAL PHOTOGRAPHERS.

BY JOHN A. TENNANT.

LII. A SUGGESTION.

A MAN wrote to me a few days ago, propounding the following question: "You have told us that the photographer's weakest point is his ignorance, and that the weakest spot in the average portrait is the pose. I am inclined to agree with you in both details. Now tell us what should be *the first step* taken by a young man who has 'learned his business' and is about to take up professional photography on his own account?"

This is a question which we can profitably discuss in these papers. I suppose that the answer will vary with each reader—there seem to be so many things to be done first when a man takes upon himself the big responsibility of a business.

To my mind, however, one of his first steps should be to begin to get together a collection of the best portraits obtainable, accepting as "the best" those most widely approved by critics, until he is himself competent to judge a picture for himself. Such a collection will not be an easy thing to make, and it may cost a little money, as well as time and labor. But it will prove a magnificent investment—if it is used.

Let us outline such a collection. It should contain (1) as many as possible of the best pictures of the year; (2) good specimens of the work of acknowledged leaders;

By L. V. Kupper.

(3) examples of portraits by famous photographers no longer living; (4) specimens of home and foreign work; (5) reproductions of portraits by painters of repute of different schools and periods, and (6) a few good photographs of sculptures, ancient and modern, especially the latter. These should be kept together, in portfolios of convenient size, stored in an easily-get at able closet, or spread upon the walls of reception-room or "den."

What is the object of this collection, and in what way will its practical value offset its cost? Its object is plain: To inform the photographer of what has been done, and of what is being done, in his profession and the kindred arts; to keep him in daily touch with the best and highest standards; to give him that best of all "capital," fresh ideas and suggestions, not to speak of inspiration, and to make him ashamed of doing less than his level, intelligent best with every subject. The way in which it will do this depends upon the photographer's use of his collection. An occasional glance over it will do but little good. He must *know* it, as he knows the developer he uses—by daily contact. He should acquire the habit of going to it as a journalist goes into the streets or books—to get at their meaning, their significance, the motive behind the deed, the principles and thoughts which guided hand and mind. He should learn to analyze his collection, piece by piece, to see how much is due to the subject, how much depends upon the process or method of expression, and how much depends upon the man behind the process. As he grows into familiarity with his collection, not only will his mind widen, but his power will increase. Unconsciously, when he has learned to see pictures, he will make pictures; when he has grasped, from a hundred examples, what portraiture means, he will unconsciously make portraits worthy of the name. His collection, as it grows, will solve a thousand difficulties and make hard things less hard to accomplish. He will learn what is perhaps the most precious lesson a photographer can learn—the value of simplicity in portraiture; and that other equally important lesson—the value of subordination. He will understand, as he becomes familiar with his examples, that when we look at a friend we see the individuality (the personality or characteristics) of the friend, and that all other things, with his surroundings, are lost sight of, seen in an impressionistic way—felt rather than seen. His collection will tell him that, in their portraits, the masters

aim for one thing only—concentrating lines and forms and light toward the chosen point of interest. Gradually, but surely, his collection will help him to control the over-weaning desire of his lens to make map-like reproductions of his sitters; will help him to curb his own insane proclivity to arrange a table, plant, vase, cushion, footstool, chair, rug, and background around and about every sitter, without exception. As he adds example after example to his portfolios the big fact will dawn upon him that likeness is the one thing essential in a portrait; that accessories and grounds are stumbling blocks unless they help in the expression of the one essential, likeness; that after likeness come beauty and interest; that beauty is variety in unity, the presentation of a succession of attractive ideas in unison, one leading to another, holding the attention and giving pleasure to the mind and eye; that interest is incident, dormant in the character or portrayed in the pose or action. Is this "high-falutin?" By no means. Plain sense as far as I can express it—suggestions of things seen in portraits made by photography in the hands of men who know its capabilities.

How shall the photographer get such a collection? This is not an easy question to answer explicitly. People who really want things generally get them—and honestly, too. Portraits by living photographers can be bought or gotten by exchange; the purchase of one really good portrait every week would be splendid progress. Reproductions of early portraits and paintings are obtainable in many ways at absurdly low prices. The stores of art are inexhaustible. Look at the Prang *Platinettes*, or the *Soule* series, or the *Braun* carbons, or those published by Hanfstaengel. Look at the *Riverside Art Series* or those more wonderful *Monographs on Artists*. The choice is endless. For examples by early photographers the collector will have to rely upon engravings scattered here and there; thus, a few months ago, one of the German journals reproduced many choice examples of portraiture by David O. Hill (of Calotype days). Mrs. Cameron's portraits have appeared at odd times in a similar way. Portraits by some of the early American photographers may be picked up in odd numbers of the *Philadelphia Photographer* and similar sources.

Turning to modern photographers, I cannot mention all whose work is worthy of study, but the collection should certainly include selected examples by such men as Gutekunst, Brady, Rulofson, Root, Landy, Black, Sarony; and of the men of to-day, Falk, Strauss, Rösch, Pierce, Hollinger, Histed, Harris, Dyer, Day, Benjamin, Steffins, Stein, MacDonald, Somers, Eickemeyer, Holden, with Mrs Kasebier, Miss Watson, Miss Weil, Miss Ben Yusuf among the "new" professionals, and examples of the best amateur portraiture, such as that of White, Stirling, Keiley, Lee and a host of others whose work may be seen at exhibitions. I give these names merely as suggestions for a beginning. There are many more, at home and in Europe, whose work is worthy of a place in such a collection. The principal thing is to get the collection started, and to use it.

It is a melancholy proof of what was said about photographers being ignorant of their profession that, of more than twenty prominent portraitists whom I know in an intimate way only two possess even the rudiments of a collection such as I have outlined. Speak to them of the work of Mrs. Kasebier, of Francis Watts Lee, of Histed, of Crooke, or Craig Ant nan, and they neither know nor care about it. But there is a new spirit in the air; the times are changing, and the photographer of to-morrow will be a different man from the photographer of yesterday.

"*Platinum prints* of famous subjects, fifteen cents each, mounted," such is the legend in a print-shop a few blocks distant from 289 Fourth Avenue. In this instance the pictures were half-tones, pure and simple, like the illustrations in the body of this magazine. It is an instance of carrying a fashion to extremes.

There have been many prints turned out by photographers as platinum prints which were not platinum prints at all. The stores commenced selling low-priced bromide prints—horrible work photographically—and labelled "platinum." Now it has got as low as half-tones. Don't let us slander a beautiful process by giving its name to an imitation. It is unjust to the platinum if the imitation is inferior; it is unjust to the process by which the imitation was made, if it is equal or superior to platinum, and it is not honest.

By L. V. Kupper.

SOME people are forever looking out for chances; others look out only when they need one, and then usually find it; still others make the chance. One man grubs along for twenty years, just making a living, and suddenly sees that by entirely altering his methods there is a chance to make money. He has it in him to throw off his old work and strike a new vein—and he does it. We once knew a case of a man—as capable a photographer as ever lived—who starved in respectability, with a high-class trade so utterly exclusive that he had not half a dozen sitters a month. All at once he electrified his friends by announcing that he was out for cheap work. He moved his studio among people of moderate means, and while he gave them of his best when they could appreciate it, he was not above turning out what his customers liked. And he made money.

There is a big chance for some photographers on special lines. Rinehart, cut in Omaha, has made a wonderful hit with his Indian subjects, and they are now on the market in thousands, from platinotypes to half-tone engravings, and in color. The

By Elton W. Clark.
IN THE BRONX.

man that can hit the right thing, and do it well, finds success. And the right thing is more often to be found than many people imagine. A few years ago Winfield Scott moved down into Mexico and commenced business. We are often told that if a man wishes to succeed he must not go South; but this was going South, indeed But Mr. Scott has stamped his individuality on his work, and has made a complete success of it. It has many points in its favor—from a business point of view—and perhaps the most striking one is the technique. In view and figure work of this kind a good photograph, full of detail, is what the buyer wants. Here we have perfectly exposed and developed negatives, printed on a detail showing glossy paper, which will tell you whether a dress is of cotton or of wool, and enable you to trace the pattern of the ear-ring or the bangle. The two illustrations here given are typical of Mr. Scott's work, and they are both taken in the open air. The "Woman of the Taltecs" is a good instance of seeing an opportunity and seizing it. The sun was rapidly rising and shadows were growing shorter and shorter. In one corner, formed by the hut and a wattle of cornstalks, about seven feet of shade offered a chance, and here the subject was posed. No indications are in the photograph of such poverty of space. "The Hall of the Mosaics" is a record of one of those many relics which are earning for Mexico the title of the "Egypt of the West." Such work, with its wonderful texture of detail, must prove of much interest to visitors to these scenes. Whether of antiquities or of the life of the people, Mr. Scott has a happy faculty of choosing the right subjects and of making the most of them.

The view "In the Bronx" will appeal to those thousands of New Yorkers who are so unreservedly proud of their great

By Winfield Scott.
HALL OF THE MOSAICS, MITLA, MEXICO.

By Winfield Scott.
A WOMAN OF THE TALTECS, MITLA, MEXICO.

natural park; but beyond them it touches all who love the open air. It is a typical example of those views so delightful to the outdoor photographer when first seen, and so disappointing when realized in a photograph. None but those who use a hand camera on waterfalls know how much harshness it is possible to get into a photograph. The water is so very white, and the rocks are so very black, that nothing but much enthusiasm can make the picture acceptable to its producer. In the photograph by Mr. Clark we have the rare exception, in which the very swirl and sparkle and rush of the water are caught, and in which there is not a detailless shadow, even under the heaviest rock.

Mr. V. Kupper, of Edinboro, Pa., may be mentioned as another professional worker who has for years appreciated the value of outdoor photography as a means of recreation and also as a source of income. His landscapes have thus far been marked by considerable pictorial quality, and have given pleasure to the hundreds who have purchased them. Many examples of his work have already appeared in these pages. We offer two of his later pictures herewith to add persuasiveness to the ideas which are placed before our professional readers in these suggestions.

The open air should be the playground of the professional photographer. From his duties in the studio and dark-room to the open fields and waste lands is a sufficient change, and restful alike for body and mind. If he has confined himself to the studio work, and got rid of "shop" when he changed his coat, let him make a new break. Try a small camera out of doors. It is wonderful how easy it is for a man straight from under the skylight to make mistakes with a hand camera. The light is so very difficult and so very variable, and so many new conditions arise.

EVENING CALM.
Copyright 1898 by L. V. Kupper.

THE COMING ECLIPSE.

We have received several inquiries as to the best methods of recording the coming eclipse. We fear that but little can be done except by those who are fitted up with special apparatus, and who are, therefore, already conversant with the work. The difficulties are several; not the least being that everything has to be absolutely —not approximately—right at the moment, and that, a few seconds covering the total time, everything must work to the fraction of a second without hitch. With an ordinary hand camera the size of the sun on the plate is a mere speck, and unless a man is fortunate in the possession of a good telephoto lens, and knows how to use it, his only chance is to replace his lens with a telescope. The work would have to be confined to snap-shots, or up to about 1½ seconds at most, or the travelling of the sun will make a blur on the plate. Perhaps, for the possessor of the necessary telescope the most satisfactory plan would be to dispense with the usual camera altogether, just fastening an ordinary small wooden box to the end of the telescope. This has been aptly described in *The Photogram*: "All that is requisite in the way of camera may be constructed out of a cigar box, the joints being bound around with thin leather to render the chamber light-tight. The little cubical box (about 3½ inches face) thus formed may be attached to the eye end of the telescope by means of an adapter in the form of a tube made of brown paper, and of a diameter suited to the telescope in conjunction with which it is intended to be used. The dark slide, of course, is of the ordinary kind, in miniature. There are two methods of taking pictures of celestial objects: (1) The object glass of the telescope may be used alone for forming images, that is to say, the principal focus of the instrument where the picture is smallest and most sharply defined, and (2) the eyepiece may be employed as a secondary magnifier in conjunction with the object glass. In this case, however, the image, though large, is not so satisfactory, and it is, therefore, better to enlarge in the usual way from the negative obtained by the object glass alone."

It must be remembered that a telescope is only achromatised for the ordinary visual rays (red end of the spectrum). Therefore, when the object is focussed the plate must be moved a little nearer the lens before exposure. This distance may be very slight, less than one-quarter of an inch, but can only be safely estimated by a trial exposure, using the room as a model. An instantaneous shutter either before the object glass or behind the eyepiece will be needed, unless the rough and ready method of holding a black card over the object glass, withdrawing and replacing it by hand, be adopted. One of the most instructive articles on this interesting phase of work was penned by Mr. L. A. Pope, of the Indian civil service, recounting his preparations for the eclipse in January, 1898. He had six months' notice to prepare for it. The authorities had made full arrangements for their observations at various points, but as there was an old camera in India which had been used for eclipse work thirty years before, they thought it might as well be used, on the theory doubtless that it could do no harm, and might do some good.

The equatorial camera, which had never been used since 1875, by Colonel Waterhouse, was found to be in very fair condition, but incomplete as regards the clockwork driving gear necessary to cause it to follow the sun's motion exactly. A clock was lent by the survey office at Dehra, where photographs of sunspots are taken daily all the year round. Some further slight additions were made to it, viz., a small telescopic finder, to enable the sun's movement on the field of the lens to be watched and the clock rate altered accordingly, and another telescope and level attached to the polar axis to facilitate the adjustment of the instrument in any latitude. The lens used was an old Dallmeyer doublet, of thirty inches equivalent focus, and a working aperture of three inches, which was reduced to about two inches for the eclipse pictures. This lens gives an image of the sun about five-sixteenths of an inch in diameter. The dark slides used were single wet-plate slides, carrying plates five inches square.

In September the instrument was ready for use, and was set up in the upper

verandah of the Photolitho Office, where it was frequently employed to take photographs of the moon in order to test the working of the clock, and to obtain the correct focus, and familiarize them with the use of the camera.

Mr. Pope wrote to the secretary of the eclipse committee and received from him full instructions as to procedure. He suggested that only seven pictures be attempted during the period of total eclipse, and advised them in the following order and duration: two, five, fifteen, ten, twenty, five, and two seconds. The shorter exposures were intended to secure the bright red prominences in the chromosphere, or immediately round the edge of the sun, while the longer ones given in the middle of totality were to record the fainter detail of the "streamers" to as great a distance as possible. The calculated length of totality at our station was one hundred seconds. My programme was to begin the first exposure at the first of totality, and to allow six seconds between each exposure for changing the plates. The sum of all the exposures is fifty-nine seconds, and the sum of the intervals for changing between each is thirty-six, or ninety-five in all, leaving five seconds to spare at the end of totality. It was also intended to give two further very rapid exposures, one just on the reappearance of the sun, and another as soon after as possible, making nine exposures in all. Constant rehearsing of this programme, generally in the dark, soon resulted in our being able to carry it through time after time without a hitch, the hundred seconds being counted for us by an assistant from a chronometer or stop-watch. The plates chosen were a rapid brand, but though they proved satisfactory for the longer exposures, the shorter exposed plates were over exposed.

Dumraon was the place selected as the observing station, as being the nearest point to Calcutta, on the centre of the line of totality. During the Christmas holidays I spent a couple of days there. A site was selected and a masonry pillar built as a support for the instrument, which, with its heavy iron stand, weighed about 1200 pounds. On the 12th of January we left Calcutta for Dumraon, the instrument and dark-room having been sent on in advance. Work began at once, and in three days' time the camera was set up and adjusted, and the dark-room put together and filled with everything required for use.

When these arrangements were complete we had five days left to us before the eclipse, each of which was fully occupied with rehearsals, experiments to find the correct focus, and so forth. The rehearsals were not confined to daylight, one at least being held every evening after dark in order to accustom us to working in the partial darkness, which it was expected would prevail during totality, and each rehearsal was conducted with the same strict attention to small details as it was intended to pay during the actual performance. The following description of the rehearsals is taken from the report which has been submitted to the surveyor-general: "Before each rehearsal nine plates were placed in the slides, after being backed and having the upper edge marked with the number of slide on the film side. Backing solution was used at first, but afterward a solution of asphalt in benzol, as recommended by Captain Hills, was adopted, as it was found easier to apply. The nine slides were then placed in order in a wooden box having nine compartments, and a red cloth cover inside the outer lid, so that when the latter was opened the slides would still be protected from direct sunlight by the red cloth up to the last moment before totality, when the cloth could be thrown back. Two of these boxes were made up; one to hold the slides before the exposure, and the other to receive them as they were taken from the camera. The boxes, one containing the slides and closed, and the other empty and open, were placed on small tables, one on each side of the camera, and a native stood by each, one to hand me the slides in succession, and the other to receive and place them in the second box after exposure.

"One man then took up his position at the lens to make the exposures, and I reserved to myself the changing, opening, and shutting of the dark slides. The clock having been started and the lens pointed as nearly as possible in the direction of the position to be occupied by the eclipsed sun, the first slide was placed in the camera and the shutter opened, while the native stood by to hand me slide No. 2 when required.

"It was one man's duty to count the seconds. He sat at a table near the camera with a chronometer, and on receiving the word from me began to count 'noughts.' After allowing him to count noughts for a few seconds, I gave the signal for the commencement of totality by covering one of his noughts with the word 'one,' distinctly uttered, but without any warning; on which the counter, instead of counting another nought, counted 'two,' and continued counting until told to cease after the last exposure. This duty he performed exceedingly methodically and well, never making a mistake after the first few rehearsals. The word 'one,' uttered by me, was the signal to expose the first plate. No cap was used for this purpose, but a circular piece of zinc sheeting, about twelve inches in diameter, let into a wooden handle and resembling a fan, which was held lightly against the hood of the open lens from the moment the first slide was inserted in the camera. At the word 'one' the fan was instantly removed, and again replaced the moment the counter said 'three,' thus giving two seconds' exposure. The shutter of the first slide was then quickly pushed back, and the slide withdrawn and handed to the native with the empty box, who laid it in its place and stood ready to receive the next. The second slide was in the same moment placed in my hands by the other native, inserted in the camera, and the shutter withdrawn. All this only occupied three or four seconds, so that there was usually at least two seconds to spare before the word 'nine' was reached, and the second exposure had to be made; but the operations required a combination of smartness and lightness of touch that were only acquired after considerable practice. Any sticking of the shutter, or fumbling, would result in the correct moment of exposure going by and thus vitiate the whole rehearsal, which had to be commenced again *de novo*. To make them slip easily into the camera, the edges of the slide were kept well polished with powdered graphite. At the close of the seventh exposure, which closed at the ninety-sixth second, the manipulations had to be performed with even greater speed in order to secure the snap-shot simultaneously with the reappearance of the sun at the hundredth second. However, with practice, this could be managed without difficulty. After the rehearsal the clock was stopped and the slide-box removed to the dark-room for development of the plates.

"The sun rose on the morning of the 22d in a cloudless sky. This state of affairs was maintained throughout the day, and there was, moreover, little or no dust in the air, so that more favorable conditions could not possibly have existed. The first contact was watched for through the telescope of our theodolite, and was seen to occur within a second of the time calculated. We had still an hour and twenty-five minutes to wait before totality, and this was occupied in making final preparations and seeing that everything was in order. A few minutes before totality we wound up and started the clock, and took our places at the instrument. I watched the rapid disappearance of the sun through a pair of dark binoculars, and when there was little left but a fine crescent I gave the word to the counter to begin counting noughts, and turned in the direction of the southwest to watch for the approach of the moon's shadow, which it was expected would have given us the signal for the commencement of totality. This was a false move, as it happened, for the shadow was invisible, and instead of giving the word 'one' at the exact commencement of totality, I gave it three seconds late, thus reducing the interval of five spare seconds at the end to two seconds. The programme was then gone through without a hitch.

"Immediately after the last exposure the camera was clamped up in the exact position it occupied at the end of totality, in order to secure a star-trail plate after dark the same evening, this being required to enable us to obtain the 'orientation' of the eclipse pictures with approximate accuracy. The box containing the nine plates was then removed to the dark-room, and the plates were developed with pyro-soda, slightly diluted with water to weaken it. The plates all came up well, though the three long exposures were much over-exposed. Had I to photograph the corona again under similar weather conditions I would begin and end by giving rapid hand exposures on slow plates, with one or two longer ones (up to five seconds) during the middle of totality on faster plates."

DEVELOPERS, OLD AND NEW.

BY C. H. BOTHAMLEY,

IN THE "CAMERA CLUB JOURNAL."

SINCE I had the honor, about two years ago, of bringing before the Club what was then a new developer—ortol—at least four other new developers have been put on the market, with, according to their vendors, more or less strong claims to public support, and it is mainly about these new developers that I propose to speak to-night, dealing with the old developers only by way of comparison.

I am aware that there are people who say that the old developers are good enough for them, and who do not at all see what is the use of troubling about any new developers. Well, I take it that it is not necessary for anyone, in the present state of affairs and in the light of current events, to enlarge at any great length upon the danger of supposing that one's present methods are incapable of improvement, and are the best possible under all conditions. Again, in answer to the particular question, "What has been the practical outcome of the numerous developers that have been introduced during the past few years?" I would point out that the introduction of, at any rate, some of these organic developers has put printing on bromide paper upon quite a different footing as regards its convenience, the character of its results, and, I am inclined to think, the permanence of its results also. Very much the same thing may be said concerning the production of lantern slides on gelatino-bromide plates. I am inclined to think that many photographers have not yet completely realized the important differences between bromide printing as carried on nowadays on a very large scale by some professional workers, and also by many amateurs, and bromide printing in those days when ferrous-oxalate was practically the only available developer. To gain distinct advantages in two such important branches of photographic work is no small thing, and you will doubtless agree that, as a matter of principle, it is always wisest to make sure by a little careful experimental inquiry that we are not missing some real advantages by being too content with what we already have.

DIAMIDO-RESORCIN.

The first new developer that I have to bring before you is closely analogous to an old and well-known developer—amidol. Both are derived from the same parent substance, benzine, C_6H_6, a compound of six atoms of carbon, C, and six atoms of hydrogen, H, but amidol is directly derived from phenol or carbolic acid, C_6H_5OH, which is benzine, in which *one* of the hydrogen atoms has been displaced by the hydroxyl groups, OH, whereas diamido-resorcin is derived from resorcin, $C_6H_4(OH)_2$, which is benzine, in which *two* of the atoms of hydrogen have been displaced by *two* hydroxyl groups, OH.

Neither phenol nor resorcin is a developer, but if by suitable chemical reactions we displace in each case two atoms of hydrogen by two amido groups, NH_2, we obtain in the one case diamido-phenol, or amidol $(NH_2)_2C_6H_3OH$, and in the other, diamido-resorcin, $(NH_2)_2C_6H_2(OH)_2$, and both these products are powerful developers. The relations between them will, perhaps, be clearer from the following table:

	C_6H_6	
C_6H_5OH	Benzine.	$C_6H_4(OH)_2$
Phenol.		Resorcin.
$(NH_2)_2C_6H_3OH$		$(NH_2)_2C_6H_2(OH)_2$
Diamido-phenol (or Amidol).		Diamido-resorcin.

Both amidol and diamido-resorcin are soluble in water, forming solutions which are strongly acid and somewhat rapidly acted upon by the air. They both darken to about the same extent, but the amidol solution becomes purple, while the diamido-resorcin solution becomes deep orange.

Various "preservatives" give practically the same results with both substances. Originally the solutions are acid, and putting in another acid does not tend to prevent the action of the air to any appreciable extent. If dissolved in a sodium-sulphite

solution there is a marked difference, neither of them is so rapidly acted upon by the air, but they discolor at about the same rate. It is important, however, to bear in mind that the degree of discoloration is not a safe indication of the amount of change that has gone on. You may have in one case a small amount of alteration producing a substance which is an intense dye, and in the other case a large amount of alteration producing a substance which is only a weak dye.

Potassium metabisulphite has rather more, but not much more, preservative effect than sodium sulphite, and again the amidol and diamido-resorcin behave in very much the same way.

In appearance they are somewhat different. Amidol crystallizes in practically white needles; diamido-resorcin crystallizes in small yellowish leaflets. I believe that the extent to which amidol in the solid state alters when exposed to air has been very much exaggerated, and that the differences that have been noticed are to be explained by the difficulty of purifying a substance like amidol; and the degree to which it alters is, I have no doubt, largely determined by its purity or otherwise. I have here a bottle about half full of well-crystallized amidol, which has been in my possession certainly for at least three or four years, and has been occasionally opened to take some out, but the crystals are almost unaltered; they are slightly grayish, but for all practical purposes the amidol is as good now as it was when first purchased. On the other hand, I have had some amidol in my possession for a much shorter time and it has altered to a much greater extent, and I think that alteration is due to the presence of impurities. Diamido-resorcin likewise alters very slowly when exposed to air in the dry state.

I now show you a lantern slide which illustrates a rather important point. A simple aqueous solution of amidol will not develop, and a simple aqueous solution of diamido-resorcin will not develop. The plate shown on the screen was, after exposure, left in a simple solution of diamido-resorcin for seventy-five hours without the development of any trace of image; but, just as amidol acquires its developing power by the addition of sodium sulphite, without any alkali, so diamido-resorcin becomes a developer in the presence of sodium sulphite without any alkali; and after that plate had been in the plain solution for seventy-five hours, without the appearance of a trace of image, a small quantity of sodium sulphite was added, and then the strong image that you see on the screen was developed in less than ten minutes.

The character of the negative obtainable with diamido-resorcin is practically the same as that obtainable with amidol. Messieurs Lumière recommend the use of a 3 per cent. solution of sodium sulphite and about ½ per cent. of diamido-resorcin —*i. e.*, about two grains to the ounce. I find, however, and the fact is of some interest, that diamido-resorcin is more soluble in a 3 per cent. solution of sodium sulphite than it is in a 5 per cent. solution. With a 5 per cent. solution the diamido-resorcin first dissolves somewhat readily, but after a little time a considerable proportion of it, or, more probably, of the free base, is re-precipitated, and in the experiments that I made with bromide paper I adopted the plan of using only a 2 per cent. solution of sodium sulphite and adding diamido-resorcin to it in about the same proportion just mentioned. I now pass around the prints on bromide paper. Two of them are from the same negative, the only difference being in the time that they remained in the developer, and they illustrate the general kind of action of diamido-resorcin; that is to say, it tends to give a very soft negative or a very soft bromide print in the early stages of development, but if the process is allowed to go on so as to develop out practically all the light action, you can get as much vigor as you can, for example, with amidol, which so much resembles it. But there is this drawback; although the amount of discoloration of the diamido-resorcin solution is apparently not great—it never gets beyond a deep orange—yet that deep orange substance, whatever it may be, stains gelatine and paper, and adheres most tenaciously to both. The stain can be removed by long soaking in water, and its removal is promoted by the addition of some alum to the water, or a small quantity of acid, or both, and then the results are not appreciably different from those obtained with amidol. But I am bound to say that, so far as my experi-

ments go, diamido-resorcin does not seem to have any advantages over amidol for any ordinary photographic purpose.

HYDRAMINE.

The second new developer is a very peculiar substance, and seems to belong to a new class of chemical compounds.

Hydroquinone is well known to photographers; to the chemist it is benzine, C_6H_6, in which two of the atoms of hydrogen have been displaced by two hydroxyl groups, and consequently its chemical formula is $C_6H_4(OH)_2$. Now, there is another substance, paraphenylene-diamine (or paradiamido-benzine), not generally known to photographers, but very well known to chemists; it is analogous to hydroquinone, but contains two amido groups, NH_2, instead of two hydroxyl groups, and its chemical formula is $C_6H_4(NH_2)_2$.

Messieurs Lumière and Seyewetz have found that hydroquinone and paraphenylene-diamine will combine together, forming a new substance which is very different in many ways from either of the parent substances, although it contains all the constituents of both of them.

The exact chemical nature of this new substance has not yet, so far as I can ascertain, been fully worked out, but it is of considerable interest in connection with the general relations between the chemical constitution of compounds and their developing power. For want of a better name the substance is at present called "hydramine," though it seems doubtful whether it is really an amine in the proper sense of the word.

This hydramine is not similar in appearance either to hydroquinone or paraphenylene-diamine. It is a bulky, white substance, crystallizing in thin plates which have a pearly lustre. It dissolves only slightly in cold water, more easily in acids and in sodium sulphite solution, and still more easily in presence of a caustic alkali. The aqueous solution alters when exposed to air more readily than an aqueous solution of hydroquinone, or a similar solution of paraphenylene-diamine, and a dark, brown-black precipitate is formed. In presence of acids it alters much less rapidly and seemingly to a much smaller extent. Dissolved in sodium sulphite solution it alters very little, even when freely exposed to air, and at most becomes deep yellow. Dissolved with 2 per cent. of potassium metabisulphite, it can be left exposed to the air in an open dish for several weeks, without discoloration of any kind.

Now, according to the discoverers of this substance, it develops by itself when simply dissolved in water, and the next slide is an image developed by a neutral aqueous solution of hydramine. It was allowed to act for a long time, certainly, but it is very remarkable to find a substance which will act as a developer to this extent when simply dissolved in water, and giving a solution that is neutral to litmus. The only other substances with which I am acquainted that show anything like the same action are eikonogen, which is a derivative of naphthaline, and a substance known as phenyl-hydrazine. It is also stated that diamido-oxydiphenyl, the active substance of the developer "diphenal," behaves in a similar way.

According to the discoverers, the developing power is not materially increased by adding sodium sulphite or sodium carbonate or potassium carbonate, but for practical purposes the addition of a caustic alkali is necessary, and the particular caustic alkali that they recommend in caustic lithia, the oxide of lithium, which has many advantages, from a photographer's point of view, over caustic soda and caustic potash; it is more easily manipulated, is not acted upon by the air with anything like the same rapidity, and is easy to weigh in comparatively small quantities. The formula recommended for the hydramine developer is—

Water . .	1000	parts or c. c.	16	ozs.
Crystallized sodium sulphite*	32	" grammes	215	grains.
Caustic lithia . .	3	" "	20	"
Hydramine . .	5	" "	35	"

It can be kept in an ordinary bottle for several days without altering appreciably. I have here a bottle containing some of the hydramine developer which was left in an open dish, in a shallow layer, for twenty-four hours, and it has acquired only a golden-yellow color.

(To be continued.)

*Or anhydrous sodium sulphite, 16 parts or grammes, or 110 grains.

SUPPLEMENTARY LENSES FOR ALTERING THE FOCUS OF DOUBLETS.

BY T. PERKINS.

EVERY photographer, as soon as he has passed the initial stages, finds out that it is impossible to do all the work which comes to hand on a certain sized plate with one lens alone. It may be that he has a building to photograph, and from the nature of the ground his choice of position is limited. He turns his camera on the building, and it may be that he finds he gets only part of what he wishes to photograph on his focussing screen. The object appears too large. There are only two ways of getting it smaller; he must either go further away from it, or he must use a lens of shorter focus. The surroundings possibly prevent him adopting the former method, so that nothing remains but the latter. Or the case may be reversed; the object may appear too small, and may not occupy a sufficient area on the plate. He must then go nearer to it, or use a longer focussed lens. But it may happen that it is impossible to get any nearer to it, or if he can approach it it may chance that the view seen from the nearer stand-point would not compose so well for a picture, so that a longer focussed lens must be employed. Hence it will be seen that at least three, and in many cases even more, lenses may with advantage be taken out by a photographer when setting out for a day's work; indeed, it is seldom that even half a dozen plates can be exposed in succession to the best advantage if only one lens is taken. But the purchase of a battery of lenses is an expensive business, and the carrying of them about has certain disadvantages, not the least one among them being the possibility of losing one, if it has to be repeatedly unscrewed from the front to make way for another, when it may happen to be mislaid or forgotten, as one of my own was once upon a time, when I was photographing some churches several hundreds of miles from home, and it was more than a month before it was found, on a gravestone, and restored to me by the sexton of one of the churches I had visited.

It is somewhat surprising that opticians have not hitherto, to any extent, made use of supplementary lenses to alter the focus, either increasing or decreasing it. This method, however, has been sometimes employed, but the plan has not come into general use. I feel sure that if it were adopted by opticians it would prove a boon to many photographers, although it might possibly militate against the sale of a number of separate lenses.

A concave achromatized lens, known as a "Barlow" lens, has long been employed for practically lengthening the focus of telescopic object glasses, thereby increasing the magnifying power with any given eyepiece; and the same principle has been utilized in Dallmeyer's telephotographic lenses, a negative or concave lens element being placed behind a rapid doublet, by means of which not only a great increase of working focal length can be made without unduly increasing the camera extension, but also any desired focal length between wide limits can be obtained at will by altering the distance between the negative element and the positive lens behind which it is placed. In the Frena fixed focus cameras, by the use of what are called "Frena magnifiers," the focal length can be decreased so that the camera can be used for near objects without increasing the extension, which the construction of the camera will not allow; for it is well known that, owing to the principle of conjugate foci, the nearer an object is brought to the lens the further behind it will the image which it forms lie; for instance, the fundamental formula,

$$\frac{1}{u} + \frac{1}{v} = \frac{1}{f}\,*$$

(where u and v are the distances before and behind the lens of a point on its axis, and the image of u that the lens forms, and f its principal focus) shows us that if u is decreased and therefore $\frac{1}{u}$ increased, $\frac{1}{v}$ must be decreased in value, and therefore v increased; but in a fixed-focus camera v

* This equation is a form which may be used when the lenses are positive ones, and u v f are all considered positive.

cannot be altered; hence, if u is decreased and consequently $\frac{1}{u}$ increased, $\frac{1}{f}$ must also be increased—that is, f must be decreased—that is, the focus must be shortened, which can be done by placing a convex lens before the front of the doublet, which makes parallel rays from a distant object strike the doublet in a state of convergence, and makes the diverging rays from a nearer object parallel before they meet the doublet, if the power of the supplementary lens is properly chosen to suit the distance of the object from which the diverging rays proceed. In an article on "The Focal Length of Compound Lenses," published in the *Practical Photographer*, in the May issue of 1898, vol. ix. pp. 128–132, I pointed out the effect that placing concave or "negative" lenses before or behind the ordinary working lens had upon the "equivalent" and so-called "back focus," the result arrived at being that if the negative lens is placed behind, then the *equivalent focus* of the system so formed is greater than the *back focus*; whereas, if the negative lens is placed in front, then the *back focus* is greater than the equivalent. There is still another place that the negative element may occupy, and that is between the two components of an ordinary doublet. This position has certain advantages; it tends to flatten the field. In Dallmeyer's triple achromatic—a lens which, before the invention of the rapid rectilinear, was undoubtedly the best non-distorting lens in use—a negative lens was introduced between the two positive components for the purpose of flattening the field. If it is removed the focus is reduced to about half its previous value, but the field is found to be very much curved.

Before giving the results of some experiments which I have lately been making, it may be interesting to note the theoretical results upon the focal length made by the insertion of such a lens deduced from mathematical calculation.

In any treatise on geometrical optics the following equations will be found for obtaining the geometrical focus of a pencil of rays after direct refraction through a series of lenses (in our case three), whose axes are coincident,

$$\frac{1}{v_1} - \frac{1}{u} = \frac{1}{f_1}$$

$$\frac{1}{v_2} - \frac{1}{v_1 + a_1} = \frac{1}{f_2}$$

$$\frac{1}{v_3} - \frac{1}{v_2 + a_2} = \frac{1}{f_3}$$

where f_1, f_2, f_3 are the focal lengths of the lenses taken in order; u the distance of the object from the first lens; v_1, v_2, v_3 the distances from the respective lenses of the geometrical foci after refraction through the first, second, and third lenses, lines being considered positive when measured in a direction contrary to that of the incident rays. By eliminating v_1 and v_2 from these equations we can obtain v_3 in terms of the known quantities u, f_1, f_2, f_3. The work of elimination is easy, but the resulting value of v_3 is rather complicated. But in the special case which we will consider the work will be considerably simplified. We will imagine that the object focussed is at a great distance, so that it may be taken as infinite, and $\frac{1}{u}$ equal to zero, also that the first and third lenses are of equal focal length, as in the case of an ordinary R.R., so that we may write f for f_1 and f_3, also that the negative lens is placed midway between them, so that we may write a for a_1 and a_2; the equations will then become

$$\frac{1}{v_1} = \frac{1}{f}$$

$$\frac{1}{v_2} - \frac{1}{v_1 + a} = \frac{1}{f_2}$$

$$\frac{1}{v_3} - \frac{1}{v_2 + a} = \frac{1}{f}$$

It must, when applying these to obtain the value of v_3, be remembered that the focal lengths of positive lenses are negative, and *vice versa;* that is to say, a photographic lens that we speak of as a 7-in. focus lens has, mathematically, a focal length of—7 inches.

From these quotations we get

$$v_1 = f;\ v_2 = \frac{f_2(a+f)}{a+f+f_2};$$

$$v_3 = \frac{f(ff_2 + af + 2af_2 + a^2)}{2ff_2 + 2af + 2af_2 + a_2 + f^2}$$

also $$v_1 + a = f + a$$

$$v_2 + a = \frac{ff_2 + af + 2af_2 + a^2}{a + f + f_2}$$

v_3 is the so-called "back focus" of the system.

The equivalent focus

$$= \frac{v_1 v_2 v_3}{(v_1 + a)(v_2 + a)}$$

and on substitution it will be found to be

$$\frac{f^2 f_2}{2ff_2 + 2af + 2af_2 + a^2 + f^2}$$

These expressions determine the "back focus" and "equivalent focus" of the system if a supplementary lens of known focus is inserted, and may be also used to determine the focus of the supplementary lens that must be used in order to obtain some desired back or equivalent focus.

Since a is generally small in comparison to f and f_2, we may neglect a^2 and reduce our equations to a rather simpler form, especially if we measure the supplementary lens in values of the two lenses of the original doublet.

In one of my experiments, for instance, I used a negative lens whose focus was double that of either of the two positive lenses; that is to say, I made $f_2 = -2f$, and my expression for the equivalent focal length of the system became

$$f = \frac{2f^2}{3f + 2a}$$

In the case of this lens $f = -24$, and $a = 1$, so that $f = -16\frac{2}{7}$; in other words, the focal length of the system when used on a distant object was approximately 16½ instead of 12½, as it would be without the supplementary lens. On measuring the proportional sizes of the same objects on two plates exposed with and without the supplementary lens, I found the amount of enlargement almost exactly the same as indicated by theory.

But I have said enough about theory, and will now give the results of my experiments.

I may say that I used thin uncorrected supplementary lenses—spectacle glasses, in fact. The lens experimented with was a rapid rectilinear of about 12½-inch focus.

I first placed a negative lens of 48-in. focus close up to the diaphragm, and exposed a plate with the largest stop. The focus of the lens was thus increased, as has been already stated, by about ⅓, so that the stop was working at about $\frac{f}{10.6}$. I noticed that the field was flattened; the definition on the focussing screen over an area of a whole plate was excellent. I focussed an object about the centre of the screen at a distance of about fifteen yards. I exposed a plate and found that, as I expected, some interference with the chromatic correction of the lens had been made, the definition of the object focussed was a little softened, while that of an object thirty yards away was crisp. I next placed the negative lens in contact with the front of the front lens of the R. R. and again exposed a plate. The result was practically the same as before, though the image was slightly larger. I then tried shorter focussed negative lenses; that is to say, lenses more strongly divergent, with the result that the focal length of the system was increased. It would, of course, by using stronger and stronger negative lenses, be possible to lengthen the focus to any extent, even to infinity, and if the negative lens were more powerful than this it would throw the focus of the system in front instead of behind the lens, and no real image would be formed.

The lens equivalent to the system must be, in fact, a positive one—that is, its focus must be negative—and since the enumerator of the expression, given for the equivalent focus, is always positive, the denominator must always be negative, the condition for which will be that f_2 must be numerically greater than $\frac{f-a}{2}$.

Traill Taylor, in his book on the "Optics of Photography," describes an arrangement he has made for altering the focus of a doublet. He called this piece of apparatus a "focus adjuster." It consisted of a sliding piece of brass containing four circular apertures, into each of which a negative achromatized lens was fitted, all the four lenses being of different powers. This adjuster slid through apertures in the lens tube, and catches were arranged so that it could be known when each of the negative lenses was properly centred. The idea was probably derived from the insertion of a negative element between the two positive elements of Dallmeyer's triple achromatic. No such contrivance is on the market, but a simpler and cheaper plan which would answer most requirements, especially for landscape work, would be to have a number of thin non-achro-

matic lenses of the same diameter as the interior of the lens tube. One of these could then be inserted, pushed up close to the diaphragm, and kept in place by a metal ring just fitting into the tube, or by a piece of No. 1 Thornton-Pickard rubber moulding. To get any object sharp, it would be necessary to focus a somewhat nearer object. A few trials would soon enable the photographer to overcome this slight non-coincidence of chemical and visual foci.

Sometimes it may be convenient to shorten the focus of a lens to allow of enlarging in a camera which has not a very long extension. A photographer who possesses one lens only will generally have one slightly exceeding the length of his plate, and most cameras will only rack out to about double this distance, so as to allow of using the back combination alone. With such a camera an object can just be copied the same size, but not enlarged. To enlarge, a shorter focussed lens must be used. A positive lens inserted in the same way as the negative lens described above will, by shortening the focus, allow the same doublet to be used, but it will introduce certain defects. It will curve the field, and if a wide angle is included, will show curvilinear distortion at the edges; still, it may be used under certain conditions. I have tried a 24-inch focus lens between the combinations of a 12½-in. R. R., thereby reducing the focus to about eight inches, but I had to use a small spot, namely, the one marked $f/32$, to get sharpness all over the plate. This increased the depth of focus to such an extent that the non-coincidence of the visual and actinic foci was at the same time practically got rid of.

A better plan, however, would be to use the two weaker supplementary lenses of the same power, one placed in contact with the front, one with the back combination, as then the system would still be rectilinear, as the effect would be to diminish the focal length of each component of the original lens equally. Still, however, the field would be curved, and could only be flattened by bringing the lenses closer together, which is not possible, so that recourse must be had to a somewhat small stop, which would not, however, be a serious drawback, as long exposures may generally be given, if necessary, when copying or enlarging has to be done.

THE DEVELOPMENT OF ILLUSTRATION.

In an illustrated review of "Big Six's" Printing Exposition, given in the New York *Tribune*, Mr. Stephen H. Horgan, the head of the *Tribune* Art Department, and himself among the pioneers of process work for illustrating newspapers, thus describes the development of illustrative and reproduction methods.

The history of engraving and illustration during the last fifty years is one of frequent and complete changes in methods.

It was in June, 1850, that *Harper's New Monthly Magazine* first appeared. There were few cuts in the early numbers, and they were poor in quality. *The International Magazine* was also born in that year, and died soon after. *Godey's Lady's Book* and *Graham's Magazine* were illustrated monthlies at that time. In 1851 the first American illustrated newspaper with any pretension appeared. It was called *The Illustrated American News*. T. W. Strong, the proprietor of an engraving establishment, was the publisher. Among the engravers in Strong's employ was one from *The Illustrated London News*, who was destined to have a greater influence on illustrated publications than any other individual. In England he engraved his name as Henry Carter, but when he reached America he recut it to read Frank Leslie. P. T. Barnum was one of Leslie's early acquaintances, so that when Strong's venture at an illustrated weekly failed, Barnum backed Leslie in *The New York Illustrated News*. This was in 1853. In the meantime, Strong began *Diogenes: His Lantern*, in 1852. It was edited by John Brougham, as an imitation of *London Punch*. Strong changed its title to *Yankee Notions*, which name saved its life for fifteen years. *Yankee Doodle*, or *Young America*, was another, though unfortunate, venture of Strong's.

In December, 1855, was published the first number of *Frank Leslie's Illustrated*

Newspaper, and from that dates the establishment in this country of the illustrated newspaper as a reasonable business proposition. The Civil War placed Leslie's business on such a solid financial footing that he was encouraged to start other publications one after another, until they numbered ten. Leslie's success induced Harper & Brothers to bring out their illustrated weekly in 1857.

The method employed to illustrate all publications was wood engraving. It consisted in the artist drawing the picture on a boxwood block the exact size it was to be printed. The design on this block was then engraved into lines on the block suitable to be printed from. As this boxwood engraving was too fragile to withstand the wear of the printing press, it was duplicated in an electrotype, and the latter used on the printing press, With the advent of *Scribner's Magazine* in 1871 came improvements, the chief one being the photographing of the drawing on the boxwood. This permitted the artist to make the design as large as he pleased and in any medium he chose.

From this time might be dated the "golden era" of engraving. Printing-press makers were called on for more perfect machines, and they responded. In 1872 *The Aldine*, the art journal of America, showed the world the great strides we had made in illustration. *The Century Magazine* brought the art of the wood engraver to still greater perfection. While the public taste was being educated to expect even greater achievements on the part of the wood engraver, experimenters were at work in an endeavor to bring photography to take the place of the engraver.

The first notable step in this direction was the publication, on March 4, 1873, of *The New York Daily Graphic*, the first daily illustrated newspaper in the world. *The Graphic* during the seventeen years of its existence developed a school of pen and ink artists who have since ranked among the leading illustrators of the day. *The Graphic* method was a lithographic one, which had many artistic qualities to recommend it; still, printing from stone was too slow a method to permit of large editions. Various methods of engraving by photography in relief, so the blocks might be printed with type, were being experimented with. By 1880 these were perfected, but it was not until March, 1884, that the first New York daily paper began the illustration of its pages daily by the new method of photo-engraving. This method of engraving, by which the illustration was first drawn in pen and ink and then engraved in relief through the agency of photography, became more and more generally adopted until it came into use in the finest magazines, taking the place of wood engraving almost entirely. During this period pen and ink artists flourished, and the whole system of engraving and illustrating was revolutionized.

Since January, 1897, there has been a still more wonderful revolution taking place in the illustration of the great metropolitan daily papers. The *Tribune* led in this latest improvement, as it did in the setting of type by machinery. On Thursday, January 21, 1897, there was published on the front page of the *Tribune* a portrait of the Hon. Thomas C. Platt, on the occasion of his election as United States Senator. This portrait was printed from a "half-tone" engraving, which up to that time was regarded as an impossible method for the daily newspaper. Still, the *Tribune* printed this half-tone picture on its rapid web perfecting presses without any change in its machinery or in the quality of ink or paper used. From that date to this the illustrations in the *Tribune* have been the marvel of other newspaper proprietors, both in this country and Europe, and half-tone illustration is being tried with more or less success by newspapers everywhere. What possibilities the future holds for this latest improvement in newspaper engraving and illustrating may be predicted from the *Tribune's* recent triumphs in photographing famous dinner gatherings and reproducing the photographs perfectly by the fast printing press a few hours later. What improvements the next fifty years may bring in illustration appears to be in the reproduction of the colors of nature, and this revolution is already beginning to creep into the magazines.

KEEP your specimen frames clean, and change your specimens whenever they show the least sign of fading. Have no dirty unframed prints and cockling cards lying about.

THE INDIANA CONVENTION.

THE sixth annual convention of the Indiana Association of Photographers was held at Tomlinson Hall, Indianapolis, Ind., March 6, 7, 8, 1900.

President C. R. Reeves called the convention to order at 2 o'clock P.M., on March 6th.

Governor J. A. Mount was present and gave a most cordial welcome to the convention to the capital city, and the Association was indeed honored to have the Governor greet its members with the excellent address that he did. The response was given by Adam Heimberger, and was one well worthy the occasion, and was given as only Adam could give it.

The president's address outlined the grand work the Indiana Association has accomplished and the high plane that photography generally has reached. It touched upon the future of photography as a profession. The address, to be appreciated, should be heard.

The secretary's report showed the Association to be in a prosperous condition in all parts of the association work, and the members should indeed feel proud to be connected with an organization so well officered and managed.

The treasurer's report showed the financial condition of the Association to be all that could be desired, with a neat balance in the treasury.

The evening session was a social session at the hall to discuss affairs of general interest to the Association, and was one of the most interesting meetings of the convention. This meeting was termed by President Reeves "cracking the ice," which in itself would suggest a chilly time; but it is needless to say that it was anything but a chilly time, but was a most enjoyable time to all.

Wednesday morning was devoted to paper demonstrations at the hall and negative making at Clark's studio, conducted by F. R. Barrows. These demonstrations were well attended, showing great interest and proving very instructive indeed. The afternoon session was called at 2 o'clock, the first thing in order being the selecting of judges, the following being chosen: A. L. Barrows, Dayton, O.; N. G. Couper, Paris, Ill.; and C. C. Pike, Louisville, Ky.

The plan of a circulating interstate exhibit, which is to select the best picture on exhibition in the hall, to be sent to the next State convention, they doing likewise and sending the pictures on to the next convention, and so on until the collection has made the rounds of all the State conventions, each association forwarding the exhibit prepaid by express. This plan was passed on favorably by the convention, and the judges were instructed to select pictures.

Following was a very interesting lecture by W. J. Forsythe, of Indianapolis, on "Practical Art."

Mr. A. L. Bowersox, as a committee from the Ohio Association, was present and spoke favorably of the Tri-State Association, comprising Ohio, Indiana and Michigan associations, setting forth the advantages to be derived by such a consolidation. The result when put to the vote of the convention was that Indiana remain as she now is, the Indiana Association.

Mr. Barrows, Mr. Heimberger and Mr. Halloway were chosen as judges in special class. The idea of a permanent home for the Association was very ably presented by Mr. Shores, of Vincennes. Mr. Parrot, of Warsaw, presented a proposition from the Winona Assembly Association to make a permanent home there. After a general discussion it was decided to take no definite action on the subject for the present, but to investigate the idea further before making any definite arrangements. Convention adjourned.

In the evening the H. Lieber Co. entertained the convention at a theatre party at the Park Theatre, which was a very enjoyable affair indeed, and the Association undoubtedly appreciated the kindness of the H. Lieber Co., and especially that of Robert Lieber, in whom the Association has always found a warm friend.

Thursday morning was again devoted to paper demonstrations at the hall, and negative making at the Clark studio. The afternoon business session was called to order by President Reeves at 2 o'clock, introducing Mr. T. C. Steele, an Indianapolis

artist, who delivered a very interesting lecture on "Practical Art."

The lecture was listened to with great interest, showing the appreciation by the members of Mr. Steele's lecture, which was very instructive and entertaining throughout.

Next in order was the selection of the next place of meeting. Winona Park, Indianapolis and Fort Wayne were placed in nomination, the result of the ballot being in favor of Winona Park for the convention in 1901. The next in order was the election of officers, which resulted as follows: President, W. O. Nicely, Bloomington; First Vice-President, W. E. Vilmer, Crown Point; Second Vice-President, Milo Harley, Logansport; Secretary, George Parrot, Warsaw; Treasurer, F. M. Lacey, Indianapolis.

Following the election of officers Mr. Robert Lieber in a very fitting speech presented Mr. Reeves with a very handsome watch from "the boys" as a token of their regards for him and in a way to show their appreciation of his never-tiring efforts in behalf of the Association. The President succeeded in pulling himself together, and responded in an appropriate manner. The following was the report of the judges on the awards:

Grand Class. Heimberger & Son, New Albany.

Genre Class. First, Walter L. Dolby, Richmond; second, C. W. Miner, Fort Wayne.

Artistic Lighting Class. First, T. J. Grigson, Terre Haute; second, V. B. Hardy, Frankfort.

Miniature Class. First, W. B. Cuyler, Greenfield; second, George G. Holloway, Terre Haute.

Specialties Class. First, W. E. Vilmer, Crown Point; second, M. E. Rafert, Indianapolis.

Class for Towns of 3000 or Less Population. First, W. E. Vilmer, Crown Point; second, Otto White, North Vernon.

Class for Towns of 5000 Population. Second, J. H. Thompson, Franklin.

Retouching Class. First, L. C. Willis, Crawfordsville; second, Albert Smelser, Marion.

Special Class. First, W. F. Schrieber, Chicago; second, Knaffle Bros., Knoxville, Tenn.; third, W. H. Minns, Akron, O.

"Cabinet" Class. First, W. B. Cuyler, Greenfield; second, C. Heimberger & Son, New Albany.

Illinois and Kentucky. First, N. G. Couper, Paris, Ill.

Circulating Picture. C. R. Reeves, Anderson.

There being no further business, the convention adjourned to meet at Winona in 1901. The convention throughout was the best Indiana has ever had; more in attendance, more and better exhibits and interest shown by the members, making a most successful convention. The Association feels especially indebted to the stock dealers and manufacturers for their loyal support. We were very glad to have with us Mr. Hammer and Mr. Cramer, both of whom always attend the Indiana convention. We regretted very much the absence of Mr. Seed, who was unavoidably detained in St. Louis. To those who were kind enough to send complimentary exhibits we are very grateful, for they were appreciated. A new departure was the orchestra, composed of members. It was most successful, and we can safely say that this feature will not be missing from future meetings. To all those who aided in making this the most successful convention, we thank you all, and ask that you give the same support to make our next as successful, and with that assurance the next convention is certain to prove as interesting and useful as the one just ended.

Fraternally,

W. O. NICELEY,
Secretary.

KROMSKOP COLOR PHOTOGRAPHY.

IN 1839, Niepce de St. Victor prophesied that in a short time the problem of photography in the natural colors would be so completely solved that one might see himself reproduced "as in a mirror." Since that time many alleged solutions of this problem have been announced, raising hopes only to have them dashed to the ground again, and Niepce's magic mirror has never materialized.

After fifty years experiments along the old lines were seen to have been futile, and all recent progress toward the realization of the world's dream of color photography has been achieved on the basis of ideas which were quite foreign to the minds of the earlier investigators. Practical color photography to-day means one form or another of the trichromatic process first suggested in a general way by the eminent scientist, Prof. James Clark-Maxwell.

Many changes have been rung upon Maxwell's fundamental idea, so that we now have color reproductions by triple lantern projection, by photochromoscopic apparatus used like a stereoscope, and by other optical means, and by chemical and mechanical color printing processes. The mechanical printing processes are very far removed, indeed, from the capacity to realize Niepce's ideal of a result appearing like a reflection in a mirror; but they have their uses, and are steadily developing greater practical success and importance. Triple color printing by chemical processes for the production of colored lantern slides, although still a complicated and difficult procedure, has produced some fine results. Triple lantern projections have been made to yield very beautiful and true results by limiting the size of the projected images to a few square feet; and in this form, demonstrations of the principles of color vision and modern color photography are already being given in some of our schools and colleges with Mr. Ives' "Kromskop." The so-called Joly or McDonough process has attained to the limit of simplicity in the application of this principle, but with a linear structure of the image, which, if it had no other fault, is thereby prevented from realizing Niepce's ideal. The "Kromskop" system alone has produced a structureless image in colors so perfect as to be comparable with a mirrored reflection of the object itself, and, although restricted in its application by the necessity for employing a device like the stereoscope to see the pictures, its success and importance within the limits of its application will be a revelation to the world. The results are, in fact, better than they could be on glass or on paper, because the color records are permanent and unchangeable, and the reproductions are seen without surface reflections or distracting surroundings.

Mr. Frederic Ives has now been working uninterruptedly upon this system for many years, and by a process of evolution from complex to simple means and devices, marked by the issue of many patents, has at last made it possible to reproduce nature to the eye by means of a simple camera and a simple viewing instrument. The Kromskop camera now contains, in addition to the parts essential to any camera, nothing more than two prisms and three color screens; and the Kromskop consists essentially of nothing more than a case and four pieces of colored glass. With these simple devices, even the amateur photographer can now obtain photographic reproductions in the natural colors, with a single negative plate and no more operations than are necessary in ordinary stereoscopic photography.

A fully illustrated description of the system and apparatus is given in a booklet, *Kromskop Color Photography*, recently issued by the manufacturers for general circulation. All who are interested in colors, either as artists, scientists, photographers, or lovers of the beautiful, will find in this booklet much information which they should not miss.

PHOTOGRAPHERS' ASSOCIATION OF MISSOURI.

EXECUTIVE MEETING.

At a meeting of the Executive Committee, held at Kansas City, January, 17, 1900, there were present: Joe L. Douglass, President; Henry Moore, Vice-President; E. J. Davidson, Secretary, and G. W. Ferguson, Treasurer of the committee; D. P. Thomson and Miss Belle Johnson, members.

The President called the meeting to order. Reports of the outgoing Secretary and Treasurer were received, and, after being audited by a committee appointed by the President, were approved.

The Secretary was authorized to purchase such books as were necessary for recording the minutes of the meetings and a proper conduct of the office.

September 19, 20, and 21, 1900, and Lyceum Hall, 104 West Ninth St., Kansas

City, were adopted as the time and place for holding the convention.

Ways and means were discussed looking to raising funds to put the Association on a better financial basis, as there was a shortage to be met by the incoming officers. The Secretary was authorized to prepare a circular to the members, asking an opinion as to their willingness for an increase of dues from one to two dollars per year. The Secretary was also authorized to ascertain terms and cost of incorporating the Association.

The following is a list and condition of prizes to be given:

Grand Class. Open to the world outside of this Association. Three photos, 14 x 17, or larger. Prize not yet determined.

Genre Class. Open to the United States. Three photos, any size. First prize, gold medal; second, certificate of honor.

Class A. Eight pictures, portraits exclusively, 10 inches or larger. First prize, gold medal; second, silver medal; third, certificate of honor.

Class B. Six Paris panels, portraits exclusively. First prize, gold medal; second, silver medal; third, certificate of honor.

Class C. Twelve portraits, cabinets or larger. Competitors must be from towns not over 10,000 population. First prize, gold medal; second, silver medal; third, certificate of honor.

Class D. Twelve portraits, cabinets or larger. Competitors must be from towns of less than 5000 population. First prize, gold medal; second, silver medal; third, certificate of honor.

Class E. Eight pictures, interior or exterior, 7 inches or larger. First prize, gold medal; second, certificate of honor.

Class F. Amateur class. Six pictures, any size, any subject. First prize, silver medal; second, certificate of honor.

Rules and Regulations Adopted by the Committee, from which no Deviation will be Allowed.

1. All competitors must be members in good standing.

2. No exhibitor may compete in more than one portrait class.

3. No fee required from photographers outside of Missouri in Grand and Genre classes.

4. Any kind of photographic paper, mounts, or frames may be used, but all pictures must be framed without glass.

5. All photographs must be from negatives made since August 24, 1899.

6. Rating will be as follows: All classes, except E and F, rating to consist of ten for lighting, ten for posing, and ten for chemical effect. Classes E and F, ten for lighting, ten for composition, and ten for chemical effect.

7. Three judges, known to the Secretary only, will judge the entire exhibit.

8. All applications for space must be forwarded to the Secretary not later than September 10th, and all exhibits delivered not later than September 16th (charges prepaid), to E. J. Davidson, Secretary P. A. of Mo., 104 West Ninth St., Kansas City, Mo.

9. Exhibitors' names must not appear on pictures. They will be given a number corresponding to the number of application. Exhibitor's name will be given when awards have been announced.

10. Boxes must have tops screwed instead of nailed, with home address on the underside of cover, for return of pictures. Inclose screw-eyes and picture wire.

11. Exhibitors will not be allowed to remove pictures until close of convention.

12. No manufacturer or dealer can do business on floor of convention except floor-space or desk-room be taken.

Membership fee, $2 per annum. Dues to active members, $2. Fee for employé or amateur, $1.

There being no further business, the meeting adjourned.

E. J. DAVIDSON,
Secretary.

USE the best of everything; there is nothing cheap in photography that is serviceable.

PHOTOGRAPHY is rich in chemical formula; it has a stock on hand good for a hundred years, and the sooner photographers learn to depend less upon formulæ and more upon æsthetic culture the better for the future of the art. Let the brain make the conception and construct the picture under the light, and take it afterward, and a gratifying success will be sure to follow.

ON CLEANING GLASS.

THE cleaning of glass was, thirty years ago, one of the most important tasks of the photographer. Woe betide the man who flowed his collodion emulsion on dirty glass. With the almost universal use of gelatine plates the need for cleaning glass has largely left the photographer, but there are times when he still finds the necessity of a piece of absolutely clean glass. We all know how to clean windows, I am afraid, and the horrible prevalence of corners — eight of each pane — and if a glass is wanted for a picture frame similar treatment may suffice. If glass has to be chemically cleaned, after washing in the usual way, immerse for five minutes in a 5 per cent. solution of hydrochloric acid, rinse thoroughly under the tap, and then stand on end to dry. After they are dry they should be very well polished with powdered talc and a soft cloth; or, better, mix it to a thick cream with wood alcohol. Smear it on the glass, then clean off and polish with a clean linen rag, finishing off with a clean wash leather which has not been at any time rinsed in soda. This is very simple; but I once had much trouble in cleaning glass for collodion work, and at length found that my talc was not right. The late W. B. Bolton had an identical experience, and he describes it and the remedy as follows:

"I was quite unaware that such a result could be produced until I was called to help a friend out of trouble. He was somewhat of a novice in photography and entirely new to collodion emulsion, with which, however, he was getting along fairly well, except that his slides were invariably more or less veiled in the high-lights, and sometimes absolutely fogged beyond all decency, although the same emulsion in my hands worked perfectly clean and bright. So one day I went down to his place to investigate matters, and ended in making a discovery.

"For cleaning purposes, whether new or old glass, the first treatment was to scrub with a piece of flannel and sapolio, which I had recommended, followed by a good rinse in clean water, and the glass was then thoroughly dried and polished with powdered talc. So far, so good; the treatment is all right when properly performed; but, when I found my young friend in the act of scouring a plate with a black mixture composed of sapolio and an old film in an extremely fine state of division, I began to suspect that finely divided silver was, perhaps, not the best thing in the world to rub into the surface of a plate that had to be used for lantern-slide purposes. I found that the flannel used seldom enjoyed the luxury of a thorough 'wring out,' the only cleansing it got was when it was momentarily held under the tap before applying it to the bar of soap, which, in turn, was sometimes fairly clean, but generally nearly black, so no wonder there were foggy plates.

"A thorough cleaning of both flannel and soap block produced a great improvement, but still there remained a slight veil, which, when closely examined, showed distinctly the polishing marks. A fresh and quite clean polishing cloth, a clean cambric handkerchief, was then tried, but without any apparent improvement; so the French chalk was dispensed with, and this brought a complete cure, part of the veil arising from the use of a very impure sample of talc. This is a point that few workers give sufficient attention to, while others, I am aware, taboo the use of talc entirely on account of its dirtiness; but, if before use the talc be submitted to a simple cleansing process, its undoubted advantages are secured without the least danger of dirty plates.

"Take a quantity of the talc—say, half a pound, which will last a very long time for polishing purposes—and beat it into a paste with a little water, and, when thoroughly wetted, gradually add more until it is of the consistency of thin cream. Then transfer it to an enamelled iron pan or porcelain basin, throw in a handful of soda crystals, and boil for a few minutes; then add more water, and wash repeatedly by decantation until no trace of alkali remains. I sometimes have given a second treatment with dilute nitric acid, but the soda seems quite sufficient. When thoroughly washed, ladle it into a soup-plate, and put it into the kitchen oven to dry. When dried it is so soft that it may be powdered by merely rubbing between finger and thumb."

TONING BROMIDE PRINTS.

Our Belgian contemporary, *Helios*, gives the following collection of formulæ for obtaining prints of various colors upon bromide papers. After development, fixing, and careful washing, bleach the prints in the following bath:

Nitrate of Lead . . .	2 parts.
Potassium Ferricyanide . .	3 "
Water	25 "

As this bath also acts as a reducer, do not leave the prints too long in it, unless they are over-developed.

For brown tones wash the bleached print, and immerse it in the following bath until it assumes the desired color:

Schlippe's Salt	2 parts.
Ammonia. 880	1 part,
Water	30 parts.

For yellow tones use:

Neutral Chlorate of Potash .	1 part.
Water	25 parts.

For green, take a yellow-toned print and immerse it in

Perchloride of Iron . . .	1 part.
Water	10 parts.

For red tones, immerse a yellow-toned print in

Chloride of Copper . . .	1 part.
Water	10 parts.

Bartolozzi red prints may be prepared by bleaching a well-washed bromide print in a dilute bath of bichromate of potash, acidified with hydrochloric acid, and then immersing it in a bath of

Schlippe's Salt	1 part.
Water	25 parts.

When the right tone is secured, wash the print until every trace of yellow disappears from the white.

EDITOR'S TABLE.

THE EASTMAN KODAK CO. write to us as follows:

"We have just been notified by our Paris branch that kodaks will be admitted to the Exposition grounds free of charge, and can be used throughout the day. Tripod cameras will be allowed on the grounds only until one o'clock in the afternoon, and will only be admitted upon presentation of a written permission, which must be obtained from the Commissioner-General, and must be paid for. These tickets of admission will cost the photographer twenty-five francs per day per apparatus. Season tickets will be issued for tripod cameras, on which must appear a photograph of the person receiving them, the charge for said season ticket being one thousand francs. Moral: Take a kodak with you."

The permit for kodaks, we believe, includes all varieties of hand-cameras which may be used in the hands.

The World's Painters and Their Pictures.—This valuable book should be studied by every earnest photographer. The question, "What is there in it *for me?*" may be answered best by briefly cataloguing the contents. Having had much enjoyment and profit from reading the book, we venture to give this answer, viz.: There are *fifty-two* illustrations copied from the works of painters of all schools and countries, from Cortona (Greek) to Sargent (America). Many of these pictures are full of suggestions to the camera portrait-maker—very beautiful studies in light and pose. With these comes a book crammed with instruction—first a chapter on "Definitions;" then a large section devoted to the bibliography of the painters, followed by twenty separate chapters on the various classes of painting, as Egyptian, Grecian, Roman, and so on through all the countries where art has had a foothold in all the centuries up to date. Chapter XXII. is devoted to "Interesting Information for Students of Pictures," and the book ends (page 263) with an "Index of Artists, with Pronunciation of Foreign Names." Thus the careful author has materialized the hope he expresses in the preface—namely, "that the volume will be (as it surely will be) of especial usefulness to young students of the subject, to whom it has been carefully adapted, as well as for the general reader."

The universal interest in the subject of historic art makes it almost a necessity of the present day that the photographer should acquire an understanding of the subject, and we heartily commend this book to him as a helper.

The author is Mr. DERISTHE L. HOYT, lecturer on the history of painting in the Massachusetts Normal Art School, Boston, and Messrs. GINN & CO. are the publishers. Price, cloth, gilt, $1.40.

AN example of phenomenal prosperity is shown by the new catalogue of stereoscopic views just received by us from Mr. C. H. GRAVES, 24 North Ninth St., Philadelphia. The lists seem to cover the most interesting points of twelve or more countries, and particularly the northern countries—Norway, Sweden, Denmark, and Russia. Mr. GRAVES has made two very fruitful trips with his camera abroad, and can now offer as fine an assortment of views for the stereoscope and lantern as anyone in any country. And two dozen of his latest successes, now at our hand, prove his work to be of the very first quality in choice and in execution. They are all too pretty to specify, and are really *fine*. Less than eight years ago Mr. GRAVES started out in business with little or no capital and less repute, and he has worked industriously until now he holds a first place. He deserves it, and we congratulate him. His full catalogue, just issued, may be had on application.

THE STUDY OF ART.—In our current pages will be found several allusions to certain books and magazines of the day which provide material for the help of the art student. We present these in order that our readers may not be behind in getting the advantages they are entitled to from the remarkable growth of the public interest in art matters which now exists in our country and others. General history and literature are now made to share their importance in our schools and colleges with art. "Schools" of illustration and instruction in art are multiplied in all sections, and publishers are offering reproductions of the best art works illustrating historic art in particular, which, by their cleverness, are made available to the masses.

The photographer who does not seize these opportunities to improve himself and fall into the mass stands in his own light. "Peck's Penny Pictures," "Prang's Platinettes," Scribner's and Harper's grand collections (even the religious papers and publishers of Sunday-school books are in the work)—all offer splendid chances to own and study *the best there is. Get in the swim, friend,* and *focus on the best.*

THE RIVERSIDE ART SERIES.—In our search for such works as will supply art instruction and information to our craft we have made a fortunate discovery. It is the fact that Messrs. HOUGHTON, MIFFLIN & CO. are issuing a number of books, serially, which they call "The Riverside Art Series," the object of which is to furnish books which shall supply not only a manifest lack in the equipment of American schools, but give to *every student in art* an account of the characteristic work of great artists in such form as will enable students to gain some fair conception of the special pictures brought to their attention and inspire in them a greater love for art. All this without compelling the student to wade through a bulky biography or to search portfolios and collections without any guidance.

The "Riverside Series" is issued in four numbers per annum (quarterly) at only one dollar a year. Each volume is to contain (and does, so far) a dozen or more half-tone reproductions of the painter's best known pictures. To these is added a bibliography of the best books relating to the lives and works of the several artists. Three of the volumes for the first year are already issued, as follows:

Raphael, vol. i. A collection of fifteen pictures and a portrait of the painter, with introduction and interpretation. Edited by ESTELLE M. HURLL, author of *The Life of Our Lord in Art*, and editor of the illustrated edition of MRS. JAMESON'S *Art Works*.

This book opens with an admirable brief introduction on Raphael's character as an artist, followed by a list of books of reference, a historical directory of the pictures by Raphael given in the book, collateral readings from literature, an outline table of the principal events in Raphael's life, and a list of Raphael's contemporaries. There is also a pronouncing vocabulary. Then somewhat full descriptions are given of The Madonna of the Chair, Abraham and the Three Angels, The Miraculous Draught of Fishes, The Sacrifice at Lystra, Heliodorus Driven from the Temple, The Liberation of Peter, The Holy Family of Francis I., St. Catherine of Alexandria, etc.

Rembrandt, vol. ii. A collection of fifteen pictures and a portrait of the painter, with introduction and interpretation. Edited by ESTELLE M. HURLL.

The introduction is made up of matter similar to that in the Raphael. Among the pictures which the editor has selected as being most representative of Rembrandt's characteristics may be mentioned Jacob Wrestling with the Angel, Israel Blessing the Sons of Joseph, The Rat Killer, The Philosopher in Meditation, The Presentation in the Temple, Saskia, Sortie of the Civic Guard (The Night

Watch), Portrait of an Old Woman, The Syndics of the Cloth Guild, etc.

Michael Angelo, vol. iii. A collection of fifteen pictures and a portrait of the Master, with introduction and interpretation. By ESTELLE M. HURLL.

This volume not only equals the others, but far excels them in interest, to us, as the life and works of "the terrible" always hold the greatest charm for the photographer-student in art. The introduction contains six chapters, as follows: I., On Michael Angelo's Character as an Artist; II., On Books of Reference; III., Historical Directory of the Works of Art in this Collection; IV., Collateral Readings from Literature; V., Outline Table of the Principal Events in Michael Angelo's Life; VI., Michael Angelo's Famous Italian Contemporaries.

Vol. iv. of the series was issued in April, and is devoted to *Millet*. The half-tone illustrations are full page, of the first class, well printed, and are alone well worth the price. Each volume is 12mo., and is sold in paper at 30 cents, or in cloth binding at 40 cents per copy. Subscription for the paper bound issue is $1 per year (4 volumes), or, per cloth, $1.50.

Who will not study art now? HOUGHTON, MIFFLIN & CO., publishers, Boston, New York, and Chicago.

SOME FINE NEW EMBOSSED IMPRINTS.—We were last week shown a series of new embossed imprints which the A. M. COLLINS MANUFACTURING COMPANY has just originated. They are a rather radical departure from some of those in former use, being smaller and embodying shield and crest designs of exceeding attractiveness. The modern photographer has found it profitable to become critical regarding the appearance of the imprints which he uses on his mounts, and to the most critical and modern photographers we recommend the new embossed imprints of the A. M. COLLINS MANUFACTURING COMPANY. Like Collins' Card Mounts, they have an air of exclusiveness that has come to be considered a valuable asset.

A CORRECTION.—We learn from Mr. THEO. V. ROGERS, of Binghamton, N. Y., that the fine example of portraiture printed in our March issue, and credited to him, was made by Mr. ROGERS, of the Albany Art Union, Albany, N. Y. The correction is made with much pleasure. Mistakes will happen, but we are sincerely desirous that as far as possible the work we offer in our pages shall be correctly credited to those who make it.

READERS desirous of selling their back volumes of the MAGAZINE may possibly find a purchaser by sending particulars and prices to Mr. WILLIS L. WYMAN, of the Chicago Society of Amateur Photographers, the Art Institute, Chicago, who seeks to complete the file of "WILSON'S" for the club library.

THE Actien Gesellschaft für Anilin Fabrikation, of Berlin, send to our table a new edition of their booklet on *Patented Photographic Developers, 1900.* This gives a complete review of their many valuable specialties, with full instructions for their use. It should find a place in every dark-room. Copies may be had from Messrs. E. & H. T. ANTHONY & CO., of New York, or any large dealer.

The Witchery of Kodakery is the title of a fascinating catalogue of cameras just published by the EASTMAN KODAK CO., of Rochester. It lists all the new kodaks and the best of the standard styles. Camera buyers should see it, and we are informed that the EASTMAN KODAK CO. will gladly send a copy to those writing for it, mentioning WILSON'S PHOTOGRAPHIC MAGAZINE.

PHOTOGRAPHERS' COPYRIGHT LEAGUE.—

MILWAUKEE, April 11, 1900.

TO PHOTOGRAPHERS EVERYWHERE: The Photographers' Copyright League is now engaged in a strenuous effort to frustrate some intended legislation at Washington, which, if carried out, will seriously prejudice the interests of every professional photographer by robbing him of all private rights in his own pictures.

So, we are fighting for *you* as much as anybody. Will you not help us? If you are not already a member of the League you should become one; but we want material as well as moral support. Though all the officers of the League are rendering purely voluntary service for the good of the cause, there are certain inevitable expenses, and we shall be glad if you can favor us with a contribution, however trifling. All such contributions should be sent to CHAS. E. BOLLES, Secretary Photographers' Copyright League, 244 Fulton St., Brooklyn, N. Y. Any sum, from a dollar up, will be acceptable as an earnest of your co-operation, and will be greatly appreciated by

Yours fraternally,

S. L. STEIN,
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JUNE, 1900.

WILSON'S PHOTOGRAPHIC MAGAZINE

DEVOTED TO PHOTOGRAPHY. MONTHLY: ILLUSTRATED.

A DOLLAR IDEA. By S. Emory James . . . 241
TO THE PHOTOGRAPHERS OF AMERICA . . . 242
PHILADELPHIA PHOTOGRAPHIC SALON, 1900 . . . 243
CITRATES AS RESTRAINERS . . . 244
A STUDY IN BLUE . . . 245
GROUPS . . . 246
LETTERS TO JACK—THINGS OLD AND NEW . . . 248
INTENSIFIERS FOR NEGATIVES OR POSITIVES. By Rev. John Gmeiner . . . 249
THE SELECTION OF LENSES FOR STUDIO WORK. By C. W. Hewitt . . . 250
VENTILATION. By Patrick Sagar . . . 254
CRITICISM. By Prof. A. H. Griffith . . . 257
CHILDREN. By Wilbur Grubeman . . . 261
GEORGE EASTMAN . . . 263
PORTRAITS OF OLD MEN . . . 266
HOLIDAY WORK NEAR WATER . . . 267
AN APPRECIATION . . . 268
PICTURE FRAMES . . . 269
INTERIORS. By E. C. Middleton . . . 271
INTENSIFICATION AND REDUCTION OF LANTERN SLIDES. By Edgar Clifton . . . 273
ELEMENTARY CARBON . . . 275
DEVELOPERS, OLD AND NEW. By C. H. Bothamley . . . 279
PAPERS FOR PROFESSIONAL PHOTOGRAPHERS. By John A. Tennant . . . 284
ENLARGEMENTS FROM SMALL NEGATIVES . . . 286

OUR PICTURES:

Portrait. Negative by J. M. Reidsema, Kalamazoo. Print on Special Carbon Velox.
"The Light of Expectancy." From a Photograph by Evan D. Evans, Ithaca, N. Y.

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—Chas. E. Stafford, Chicago. Ill.

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WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

VOL. XXXVII. JUNE, 1900. No. 522.

A DOLLAR IDEA.

BY S. EMORY JAMES.

HAVE you ever thought of the value of a mere suggestion? If a man were to charge you five dollars for five minutes' talk I fear you would think the price unreasonable. And yet it might be worth one hundred to you. When you wanted to buy that new lens would not five dollars have been a cheap price for someone to tell you just exactly what you wanted to know about the capabilities of the different lenses? An idea or a piece of straight information is often worth good money. This article was suggested to me by an advertisement in the April number of WILSON'S. Filson, down in Steubenville, was offering information as to issuing a souvenir book. His suggestion was that such a book might clear $1000. Now $1000 means a good house and lot, but the money has first to be obtained.

Many photographers have issued souvenir books, and I have seen several dozens of them, some good, some bad. The thought that has so often occurred to me in looking over one has been, "now why on earth did the fellow do that?" And the only possible answer could be "because he did not know any better." It may be a modest little booklet with only one illustration. Would it not be everything to have that illustration a real beauty? And yet he—a photographer—has used a second-rate view of the town printed from a second-rate half-tone engraving. Then, too, should not his illustration be of the best printing. A difference of five dollars would be the difference between a block printed on one of the reading pages and one specially printed on good paper and put in as a frontispiece. It is so easy to do something moderately good, and so hard to do it quite first-class in every respect. I commenced to talk about souvenir books, and I will stick to my text. I do not wish to persuade anyone to issue a souvenir book, but I will give one or two hints that have occurred to me, and the hints may suggest the value of hunting for ideas. It is some months since I saw Mr. Filson's book, and I then had opportunity to do little more than to glance at it. My remembrance of it is that it was a work of great thoroughness. A large number of pages, well illustrated and covering just about everything of interest in the neighborhood. The man who compiled such a book made solid value a first idea, and he must have backed up his idea with much hard and thoughtful work. I think that if I were about to make a souvenir I would invest that two dollars.

I was shown another souvenir book a few days ago, and it was new to me. The idea is old enough, but if ever it has been applied to a souvenir book I have not seen it. It is the idea of an interchangeable leaf. Did it ever occur to you? It occurred to L. A. Dozer, in Bucyrus, or he picked it up somehow, and he has gone ahead with it. Like the Filson book, I have only seen it for a few moments—it was shown to me by Dr. Wilson a few days ago. Mr. Dozer has taken a thick, rough, dark gray paper for his mounts, cut to a uniform size of about 6 by 9 inches, I believe. One of these was printed with the title of the book, and formed a front

cover; next came a page printed with a short description of Bucyrus as a thriving and healthy manufacturing centre, with particulars of population, social life, factories, etc. The rest of the book was full of illustrations. These were printed from half-tones and mounted by hand. The titles of the pictures were on the half-tones, and so no other titling of them was necessary. When all the pictures were mounted the mounts are placed together and pierced on the left side with two eyelet holes, and tied together with a silk cord.

The great value of this idea appeared to me to be its adaptability. Just sit down for half an hour and think it over. There is no necessity for a man who has not much money to print a large number of books, with the possibility of not selling them. So much of the work can be personal work; a few hundreds of a book could be made in those slow weeks when sitters are so scarce. In this book we are considering, the town is large enough, and appreciative enough, to make half-tones pay. Probably the printer has had them made and printed, and shares in the venture. The views are mounted anyhow, as taste suggests. One page is entirely given to a good picture of some subject of general interest; another has several little views mounted on it in mosaic fashion. If half-tones do not pay, or if a more limited and more select edition would be better, prints from several views might be tastefully mounted, and then photographed down to one 5 x 7 plate. By this means a book of twelve pages would give fifty or sixty pictures. Now for its adaptability. With such a system of interchangeable leaves a portrait of the pastor and a fine view of the church, as the first two illustrations, would make it acceptable to the members of that church. Some large factory in the place might take a number of books with their own place prominently illustrated. Books might be made larger or smaller as required, and the leaves changed to any extent. In short, the book could be specialized to any extent. The printer's big bill would be reduced to a cover and a page of general information, and the bulk of the work would fill spare time. Both Filson and Dozer have well worked out good ideas, and I hope they have both been well paid for them.

TO THE PHOTOGRAPHERS OF AMERICA.

THIS letter is addressed, individually, to everyone of you, so please consider that it is especially addressed to *you*.

What are your plans regarding the next convention of the Photographers' Association of America? I am hoping that you intend to be represented, not only in person but also by an exhibit. Whether the exhibit shall be in competition, or complimentary, is for you to decide, but you and your work should certainly be in evidence in such a representative gathering as the next convention will be, and I sincerely trust that you will not disappoint us.

The work exhibited at that meeting will show the finest examples that the first workers in our art and the most effective and up-to-date methods can insure. It is the most advantageous opportunity you could possibly hope for of examining the best work from the best modern sources, and thoroughly "posting" yourself in the latest methods.

If you are honestly desirous of "keeping up with the procession" you cannot afford to neglect such an opportunity. We want to make this convention as truly representative as possible—that means that we want *you*, and we want an exhibit of your work. One or the other, if we cannot have both, but we would rather have both.

So I trust to be favored by a prompt notice that you and your exhibit may both be counted on. Do not make up your mind that you will write in a day or two—write now. The sooner you decide the sooner we will know what to expect and arrange for.

And if there is anything more you want to know about, do not be afraid of asking too many questions.

I trust to have the pleasure of greeting you in Milwaukee, on July 23d, and until then remain, yours, fraternally,

S. L. STEIN.

MILWAUKEE, JULY 23D TO 27TH.

When the average American photographer has received the thorough training that forms the basis of photography he gradually becomes conscious that art itself is a very distinct matter, and that thus far he has only a wonderful and effective tool with which to work. What he wants to make with that tool is a picture.

Looking about him, among men of his own profession, he finds that their productions vary. Some have a mechanical excellence as it seems to him, while others evidently possess more than that, as a personal note is added to the merit of the production. When he finds that an ever-increasing number like best the second kind, termed by them "artistic"—described as full of feeling, giving more of the person, more beautiful.

This second kind of photography is found, also, to result in reputation and higher prices. What people are paying for in portrait-photography is the *artistic* truth, preferred to the *literal* and *unfeeling* fact.

Now, to get that knowledge of art—what it is, and how to make it his own—is the American's enigma. By seeing pictures we can learn to understand their nature, and their structure, and, discovering their basis of principles, we can build up an art ourselves. But most American photographers see only reproductions of pictures, these are misleading, as they translate the picture "out of relation." Therefore, dependence upon the mass of reproductions—many bad, some good—has impeded the development of art in the large body of capable, aspiring American photographers.

The self-teaching man, therefore, being at a disadvantage, his only way toward a fundamental knowledge lies in the opportunity to hear the elements of the black and white art, to which photography belongs, discussed.

This opportunity presents itself at our coming convention in the lecture on the subject, "What are the Principles of Beauty in Art?" If every member will but carry away with him a clearer view of what really constitutes art, and a simple idea to work on during the ensuing year, he will have begun a true art life, a growth, and he will be prepared by his reflections, his practice, to receive the more complex lessons to be presented at a later time. Thus the convention becomes a school in which the composition specialist leads and guides those whose attitude to art is receptive.

The second subject, "Does Lighting Ensure Art?" will tend to dispel some erroneous ideas entertained upon the subject. This is necessary, as much must be unlearned before art itself can become a lucid perception. Until then we cannot hope to do more than imitate others; but as art always implies "creation," we must get knowledge to carry out ideas—the natural outcome of one's growth in art perception.

EXECUTIVE COMMITTEE, P. A. of A.

EDITOR'S NOTE.—We print this as received, but without in any way desiring to treat so serious a communication with unseemly levity, cannot forbear a smile at the classical Bostonese of this epistle—which is as unlike the "Executive Committee" as anything of the sort could well be. Let us hope that the next appeal from the "Executive Committee" will be clothed in that straightforward, practical Milwaukee English which the American photographer can understand at a glance, and that "the composition specialist" will not overlook the simplicity of common-sense when he takes in hand the "leading and guiding of those whose attitude to art is receptive." The "specialist" responsible for the above "composition" is certainly what, in very vulgar parlance, would be termed "a corker."

Now let us all make ready for the convention and its good things. It is bound to be a big affair, because the West does not do things by halves, and President Stein is a host in himself.

PHILADELPHIA PHOTOGRAPHIC SALON, 1900.

THE Pennsylvania Academy of the Fine Arts has the honor to announce that under joint management with the Photographic Society of Philadelphia, the Philadelphia Photographic Salon for 1900 (third year) will be held in the Galleries of the Acad-

emy, Broad Street above Arch, from October 21st to November 18, 1900.

The purpose of the Salon is to exhibit that class of work only in which there is distinct evidence of individual artistic feeling and execution, the pictures to be rigidly selected by a competent jury.

Pictures which have already been shown in Philadelphia at any exhibition open to the *general* public will be liable to exclusion.

No awards are offered, and no charge will be made to exhibitors. Each exhibitor will be furnished with a catalogue, which will be the official notification of acceptance.

No exhibitor may submit more than ten pictures, each of which *must be framed* separately.

The title of each picture and the exhibitor's name and address must be clearly written on the labels provided, which must be attached by the exhibitor to the back of each picture. Nothing may appear on the front of the picture except the title and exhibitor's name.

No accepted pictures may be removed before the close of the exhibition.

Arrangements will be made for the sale of pictures if desired, subject to a commission of 15 per cent.

All communications and all pictures submitted for exhibition must be addressed to the Pennsylvania Academy of the Fine Arts, Broad Street above Arch, Philadelphia, Pennsylvania, U. S. A. All pictures must be forwarded at owner's risk, *carriage prepaid*, and delivered at the Academy not later than 5 P.M., Monday, October 1, 1900.

Return charges must be collected by carrier.

The management will use all reasonable care to prevent any loss or damage to pictures in its charge, but will not be responsible for such occurrence.

Jury of Selection.—Mr. Alfred Stieglitz, New York; Mrs. Gertrude Käsebier, Brooklyn; Mr. Clarence H. White, Newark, Ohio; Mr. Frank Eugene, New York; Miss Eva Lawrence Watson, Philadelphia.

CITRATES AS RESTRAINERS.

FROM time to time, says a writer in *Photography*, the use of one or other of the citrate salts as a restrainer in development is recommended, and we were asked the other day how it was that they are so rarely, if ever, mentioned in plate makers' and other formulæ for that purpose. The reason is not easily given, but we believe it to be twofold. One is to be found in the fact that there is a rapidly increasing tendency to advocate the use of developers employing no restrainer at all, and the other in the belief, for which there is we believe a very considerable foundation, that when a restrainer is necessary, a bromide acts quite as well as a citrate, and is more generally used and accessible. For these, if for no other reasons, unless the citrates could be shown to present real advantages over the bromides, they are hardly likely to take their place. A novelty, to supplant existing methods, must offer some distinct benefit they do not possess. And in this connection the citrates are a novelty, although the suggestion that they could be used as restrainers was made many years ago.

We believe we are correct in attributing to Mr. G. Watmough Webster the position of their discoverer, or at any rate of their earliest advocate in the capacity of restrainers in alkaline development. Having to deal with a badly over-exposed plate, he hastily poured over it some citric acid solution, with a view to neutralize the ammonia in the developer, and so to stop development. The plate after this treatment having given a clean, bright negative, he was led to follow up the method, and eventually suggested a method of using as a restrainer a solution of ammonium citrate. This was added to the pyro-ammonia developer in the proportion of four grains of ammonium citrate for each drop of strong liquor ammonia present in the developer. Subsequently he pointed out that sodium citrate could be used.

Of the alkaline citrates which we ourselves have tried, ammonium has by far the most marked effect upon the action of the developer. If added in the proportion of 3 or 4 grains per ounce of solution before development is commenced at all, it will hold it back to such an extent as to

make the appearance of the image a matter of minutes rather than of seconds. Those who may care to try it will find that one or other of the citrates can be obtained at most chemists, and that they are all readily soluble in water, easily making a 10 per cent. solution.

If this be used instead of the 10 per cent. bromide solution, in making up any developer, its action upon the plate will be found to be retarded to a much greater extent. Beyond this we have not been able to find any marked difference between the two restrainers, unless they are employed at great strength. The result of using a developer with a very large quantity of bromide present is well known; the result of employing one with a proportionate amount of citrate is simply to stop development altogether.

The citrates have this peculiarity, however. The plate, the development of which has been greatly restrained by means of a citrate, can be speedily developed up by merely washing it under the tap and pouring on a developer free from restrainer. The image will then be found to appear much as if no citrate had been used at all, its immersion in the citrate bath having had little permanent effect upon the film.

But, as we said to our correspondent on the subject, we do not care to use a developer that contains any restrainer at all if we can possibly help it. Few, if any, of the good plates upon the market, fast or slow, really need any bromide or other addition to prevent fog, and that being so, it seems a pity to entail the recognized drawbacks of bromide without any corresponding benefits whatever.

A STUDY IN BLUE.

HAVE you ever seen a blue platinotype? There is a man coining money by his new secret discovery, and as it is neither new nor secret there is no reason why others should not go and do likewise. Therefore, if you are on the lookout for something new it may be advisable to read through this short article.

First, I will give the method of obtaining blue platinotypes, then after a short dissertation I will conclude with an alternative suggestion which should prove useful if you are not above taking up something which is both simple and cheap.

After a platinotype is printed and developed immerse it for five minutes in a bath composed of perchloride of iron 40 grains, water 4 ounces. Leave it in this bath for five minutes. No change will be apparent, but after five minutes' immersion remove it at once, without washing, to a toning bath composed of 10 per cent. solution of uranium nitrate, 1 drachm; 10 per cent. solution ferricyanide of potassium, 1 drachm; 10 per cent. solution of sulphide of sodium, 1 drachm; add 3 drachms of glacial acetic acid, and add water to make 6 ounces. The print will rapidly turn blue. After it has been toned immerse it for a few moments in an acetic acid bath: acid 1 drachm, water 2 ounces. This tends to fix the tone, for a blue color is very fugitive, so much so indeed that if left very long in a good flow of water the color will entirely disappear. This blue platinotype, boomed as such, may prove a novelty, and it may often be improved by a little bold working on the print after it is dry. By going carefully over places which are overprinted with a brush and a 10 per cent. solution of carbonate of soda, their density will be reduced. And this may help to give a wash drawing effect, if rightly done. Unfortunately, these blue prints have one defect—they are not permanent. If a little acetic acid is mixed into the mounting paste it will help to hold the color, and a print may last several years before it begins to change.

Photographers often find the value of some leading line, and surely enough they need one. Few are those whose trade comes steadily and remuneratively, season after season, without special effort on their part.

The great majority has to hustle and keep things moving. Competition, a most excellent thing, is fatal when one man is alive and the other man asleep—fatal to the man asleep. But where two men are both awake and both "play fair," competition does not consist in throat-cutting, but it persuades people that they want things, and so makes *new* business rather than a fight over the old.

And a novelty is a good thing for stirring up things.

If you want blue photographs why not go a step further and work in iron instead of platinum. I heard a very true remark made by a man who was examining a show-case full of blue-toned platinotypes. He said, "they are just like blue prints, only not so good." He was right. A good blue print, from not too weak a negative, would have looked better.

Everybody knows how to make a blue print. The paper prints very slowly compared with some others, and it has to be considerably overprinted. Fixing, clearing and everything are done by simply immersing the print in running water for about twenty minutes. And if the exposure and negative have been right, you get a result which is better than the blue platinum, cheaper, easier, more certain and more permanent.

Blue print paper is the cheapest and most easily made of photographic papers, and if a man is only ordinarily careful he has success from the first attempt. Blue print paper can be purchased from any stockhouse. There are one or two good brands on the market, but it is so easy to make that many dealers make their own. The photographer should follow their example. Any good paper may be used. It must be pure rag paper, free from the wood pulp which is put into cheap paper; it must be fairly hard surfaced, so that the picture does not sink into the paper too much; and it must be tough enough to stand the washing required. The photographic papers such as Rives or Saxe are, of course, perfect for the purpose, provided they have the right texture. Probably the paper will not require sizing, but if it does mix half an ounce of arrowroot to a smooth paste with a little water, then add 20 ounces of warm water and boil gently until the solution is clear. If the paper is thin it may be immersed in this, but if a thick paper is used pin it to a board and put the size evenly on with a sponge. There are many formulæ for sensitizing—one of the best is Dr. Millen's, which must be mixed and kept in the dark. Potassium ferricyanide, 1 ounce; ammonia-citrate of iron, 1½ ounce; distilled water, 10 ounces. Mix thoroughly and filter. The solution should be a deep wine color, and when dry on the paper a lemon yellow. If the solution is green, either you have been given citrate of iron instead of ammonia-citrate, or it is an old sample.

The paper to be coated is pinned to a slightly sloping board, and the sensitizer is put on carefully and evenly with a sponge, or with a broad camel's-hair brush or mop. Put the solution on with slow, steady sweeps in one direction until the paper is all covered. Then with the sponge or brush slightly dried go over it in the opposite direction. A little practice will give an even coat. The paper is then hung in the dark to dry, and as the quicker it dries the better it is, heat may be used.

Although some blue print paper will keep for months it is advisable to sensitize paper as it is required. As already said, printing is slow, and the after development, etc., is all covered by water washing. With a good plucky negative a beautiful blue print may be obtained. Do not trim the print to any orthodox size, but to some new size that may seem to suit it. Place it on two or three dark mounts to see which best shows it off. Probably you will select a Collins Carbon Black. Cut your mount to suit your picture and put the finished result in your show-case.

GROUPS.

THE photographing of groups of persons might almost be called a distinct branch of business, and there are not a few photographers who almost entirely confine themselves to this class of work. Schools, colleges, picnics, weddings, military meetings, all require their photographer, and in the aggregate they accept an immense output of pictures. Within the last few years this class of work has, I am inclined to think, both advanced and retrograded. For we see some examples which are about as bad as well can be, and more really good work is turned out than was the case a few years ago. Perhaps this double travelling is due to a dividing line which has crept in in the shape of the amateur. Nowadays there are few moder-

ately sized parties of people of moderate means in which at least one person with a camera is not included, and this has tended to do away with that class of photographer that haunted popular resorts and took groups on "spec.'

There is a good deal of the element of chance in group work, at least to the beginner, for he can seldom get a straight order at first. The goods must be seen before they are sold. If the group is a success everybody may want one; if not, scarcely any may be sold. But taking one with another a fair proportion of sales, at a reasonable price, should be made. This is in the more risky ventures; where the various classes of a school, or the members of a church or local club are photographed, a successful return is almost assured.

The great question in taking a group out-of-doors is to select a good light—direct front light is far too often used, with the result that the pictures are much too flat and poor; a side light should always be chosen, the space to be occupied by the group apportioned and focussed before the subjects are grouped.

The value of a diffused light is very great, the harshness of direct sun being heartbreaking. The shade of a tree, if properly chosen, may be a great help, or if the shadow of a building can be utilized so much the better. The grouping can be performed with the aid of one or two persons placed at the edges and centre of the space selected, and care should be taken in selecting just the necessary diaphragm; too large a stop will, of course, give the edges out of focus, and at the same time should too small a one be used it will unnecessarily lengthen the exposure, which is an important question when the steadiness of some thirty or forty persons has to be considered. When this part of the process has been completed the figures should be grouped as rapidly and carefully as possible, due note being taken as to the colors of costumes, light and dark portions being so arranged as to balance properly and make a harmonious whole.

This grouping will be easy with some little practice, and the exact capabilities of the lens will be known. Before exposure look carefully at the group to see that none of the faces are hidden, and at once make the exposure. Now that every tenth man owns a camera, and every fifth one knows all about it, the photographer must be careful to rule the situation. His should be the grouping and general arrangement, and he must not show any signs of lack of confidence.

What size should groups be? From a purely business stand-point I think that as much as possible should be given for the money. School children, whose pennies are limited, have to be content with a picture 5 x 7, or sometimes smaller—sufficiently crowded if there are thirty or forty children in the group. A picture 8 x 10 should sell very much better than one 5 x 7, but it costs at least six cents more to produce, including mount. It is for every photographer to decide for himself whether there is more money in the larger one, if he charges his customers just enough extra to comfortably cover the difference in cost. For people who can afford to pay a reasonable price, 10 x 12 is a good size, but for most work anything above this is too big.

Groups are very seldom framed; they are usually stood on the mantel where they can be conveniently picked up and examined; for a group is always critically looked at. First, Tommy or James has to be located and declared "just like," then other friends have to be pointed out and identified, and all this can only be done when held in the hand. The group should, therefore, be mounted on a stout card, and one with a liberal margin should be chosen—it looks more for the money. And there is one important little thing: the average photograph will curl its mount, if we will let it, and in spite of being propped behind the clock or some ornament, it has a strong inclination to slide about in a most perverse and flop-headed fashion. Let the mount be flat when the work is delivered; it is one of those little things which will be appreciated.

THE International Photographic Congress, to be held in Paris during the last week in July, will discuss many interesting subjects if the proposed list is gone through. An effort will be made to fix certain standards, such as the decimal system, color screens, etc. Various abstruse questions in regard to sensitive plates, copyright, lenses, kinematograph films, etc., will form the themes of some of the discussions.

LETTERS TO JACK—AND THINGS OLD AND NEW.

VI.

My Dear Jack: I duly received your letter and your "new portrait, to *show* me whether or not you had *deteriorated* (as intimated in my last letter) as a photographic model."

All right, Jack. You cannot "rile" me, but you do set me to reminiscing. The fact is, a good deal of my private reading of late has been from "reminiscences," particularly in two volumes by that noted Irish patriot, Justin McCarthy and in a single large volume of "Reminiscences by a Very Old Man," which "very old man" was my good, beloved, old friend, John Sartain, Esq., the well-known engraver and artist, of Philadelphia, and father of Samuel Sartain, one of Philadelphia's first and oldest amateur photographers, as well as an engraver of portraits on steel. But your picture causes me to "reminisce" more than these books. It carries me back to the year wherein you were born, "near Boston," where your voice could be heard at Bunker Hill when your ma tried to pacify you, somewhere on the Boston side of the Charles River. You had voluminous lungs, which are now all turned to art, happily. It was in 1869, if I am not mistaken—the year the first exhibition of the National Photographic Association was held in Horticultural Hall, also in Boston. That was an eventful occasion for the American photographer—the exhibition, I mean—not your birthday. Boston *then* was a very different Boston from Boston *now*. Then Whipple and Black were the leaders in our art, practical professional men of the very earliest plate-buffers, while now the principal business of photography in Boston is conducted by a man who probably never exposed a plate or made a print. Dear old Black and honest John A. Whipple! What famous men they were. I could fill my letter telling you stories about them. Then there were Loomis and Heywood, and the two Rowells and Burnham, and "honest John Sawyer," the pioneer stock dealer, with "father Southworth," and Wing, and "old collodion" Briggs, as he was called —all these could have stood at your christening had there been no *pa*-tent against it.

Instead of that, on the Sunday before our exhibition opened the most of them went with me to Horticultural Hall "to see if any exhibits had really arrived in answer to our call to the craft." It was in June, 1869, that we went.

You can imagine how we felt when we entered the exhibition hall and found it so full of the cases of exhibits that we could hardly get the door open! We were both delighted and overcome. Jack, *it was a solemn moment*. But even then we did not realize how much it meant to our fraternity. At that time we considered ourselves in great tribulation—our galleries were being constantly waylaid by "process mongers," who had "secrets to sell," and by "patent sharks," who insisted on examining our apparatus, tanks, etc., to "see if we infringed," etc. These troubles bound us fraternally together, and we formed a society that must have been somewhat like the one McCarthy describes as the "Fitzroy Square Bohemia." It was "charming, social, literary, and artistic," and—much more, and was made up of us all. It did not mean, as McCarthy writes, "for the most part late hours and conviviality, much beer, much brandy and soda, many cigars, unlimited tobacco," and so on; but it planned for self-protection and the advancement of our art.

Boston *then* was a rough place in which to get any "brandy and soda or much beer." Prohibition was preached, and the "Maine Liquor Law" was then at its most earnest. I remember one occasion in particular (I think it was Black who lost the bet on the number of exhibits we should have), when we were invited to "beer" or more. We filed into a gentleman's furnishing store, where we saw only an array of shirts and neckties. It was not promising to the thirsty, but we had won the bet, and we confidently followed our leader. He approached the attendant and said, "Fit all these gentlemen with collar-buttons." Then a great white shirt hanging at the rear end of the store began to recede and an "open door" appeared. Beyond this, lo! there was a finely accoutred *saloon*, where the "beer" was found. *Now* it

is different in Boston, I guess. I do not know.

The exhibition was a great success and the convention was attended by photographers from all parts of the country. No premiums were given. Dr. Towler and Dr. Boynton each occupied an evening with a lecture, and Mr. O. H. Willard, of Philadelphia, assisted by Black, gave a fine lantern exhibition. The public was admitted to the exhibition *free*, and fine audiences attended every day. At the meetings topics of a practical nature were debated and much interest shown. More than forty pages of this MAGAZINE in the July issue of 1869 were devoted to a full report of this happy affair.

This report says that "after the lantern exhibition was over the members of the Association lingered about and clung to each other (until admonished to go by the lights becoming very dim) and were loath to leave. All thought the time too short, and all wished that it might be longer. Every member of the Association seemed delighted, and all went home feeling glad that they had come and sorry that the whole craft could not be there to enjoy what they had enjoyed, to see what they had seen, to be profited by what had profited them so much; and all left with renewed hopes and aspirations and a determination to do better work."

Those were, indeed, great days, Jack. Boston had no Copley Square then. "Back Bay" was a reality, instead. Dry-plates were very unpopular, and to many unknown. Collodion kicked when there was no bromide in it, and others kicked when there was. The bromide patent had been "dead" for more than a year then, and new topics came up constantly for discussion and new processes for practice. Here are some specimens of "wisdom" followed then which seem "*Dutch*" to you moderns. Listen: "Use nitric acid in your bath." "In cool weather give your best attention to your draperies." "Prepare your toning bath at least four (for) hours before using." "Watch for new books." "Read all you can when it rains." "In head and bust pictures, let the chin occupy the centre of the mount." "Look out for your heads. Let your head turn toward the higher shoulder." "Albumenize your glass always," and so on *ad infinitum*.

How wonderfully we have grown since then! Who can doubt but what that first convention started great growth and improvement. May the coming one in Milwaukee do still more for advancement, and may the day never come when "old" and "new" shall so clash that any of our wisest ones will feel it in their hearts to write as Mr. Sartain tells us the great artist Gérôme wrote to our old friend Ferris, the artist, in Philadelphia, about "modern *art*," in 1897, as follows: "You say a few bitter words about modern art, so-called, and I agree with you. Things are seen that make reason and art shudder, for it was here that the movement began which is spreading further and further. It might be thought that we are in an insane asylum, for it is evident to me that a breeze of insanity is blowing upon us, and works that cannot be named find admirers. The more stupid a thing is the more welcome it appears. It is hard to believe. But there is no cause to be uneasy about such productions, as they will soon pass away, for only works founded on reason are lasting."

These are hard lines for an artist eighty-nine years old to have to put in his "Reminiscences," are they not, Jack? Always remember that art cannot be put on like a garment. Don't try to be a wonder! Heaven save photography, and you, and also, as ever,

Truly yours,
EDWARD L. WILSON.

INTENSIFIERS FOR NEGATIVES OR POSITIVES.

BY REV. JOHN GMEINER,

A GOOD intensifier is very useful, often saves what would otherwise be a poor negative. Some care is necessary to prevent stains which are difficult to remove, and for this reason begin always with a small quantity and add gradually, rock the tray continually, and never pour the darkening solution on the negative, pour bath in tray, slide in your negative and rock vigorously.

All negatives to be intensified should be fixed and washed thoroughly. If they have been dried it is well to soften the film by soaking the same in water.

Surface stains of mercury, copper or silver nitrate can usually be removed by very dilute hypo solution.

INTENSIFIER.

1.	Mercury bichloride . .	1 drachm.
	Potassium bromide . .	1 drachm.
	Water	25 drachms.

Add at least enough water to thoroughly dissolve both chemicals.

2. After bleaching wash in two or three changes of water, or say ten or fifteen minutes.

3. Darkening solution—in following proportions:

Hydrochinone . . .	½ grain.
Sodium sulphite . . .	2 grains.
Potassium bromide . .	1 grain.
Potassium carbonate . .	1 grain.
Water to	1 ounce.

Do not pour this over the negative, but put in a tray and slide negative into it. After the negative is darkened pour solution into a graduate, and add to it the same quantity of the above—omitting bromide—take out plate, pour into tray and again immerse negative. This process can be repeated once more if necessary.

4. Wash in three changes of water and dry.—*Northwestern Amateur.*

THE SELECTION OF LENSES FOR STUDIO WORK.

BY C. W. HEWITT.

Extracted from *The Amateur Photographer* (London).

ALTHOUGH it is probable that more attention is now paid in the choice of lenses for studio work, to such matters as focal length, than was the case in the early days of photography, yet it is almost certain that much less money is spent on individual lenses, at any rate in the smaller studios. Landscape lenses, rapid rectilinears and portrait lenses, have, during the past ten years, been produced at greatly reduced prices; and while the standard makers still maintain something like their old prices, the cheaper objectives of English and Continental firms run them so closely in quality, that the professional just commencing, if he is not doing everything "regardless," or the amateur who purposes taking a few portraits occasionally, may well be excused if he prefer to purchase, at possibly a third the cost, a lens which will produce approximately equal results on the majority of occasions. It is certainly not our intention to decry the admirable lenses which are placed on the market by two or three of the best firms, nor do we suggest that the prices asked are high when the absolute perfection of the instruments is taken into consideration. And if a first-class objective can be purchased, with which the bulk of the professional work will be done, by all means let it be procured.

If such a standard lens be beyond the purse of the photographer, then recourse must be had to one of similar construction, of possibly foreign manufacture. These are supplied by various houses. But whatever selection is made, the instrument should be thoughtfully chosen for the bulk of the work it is destined to accomplish. Let us briefly consider these requirements.

We will assume that the studio is only 20 feet in length, about as short as any studio would be built for general professional work of a good class. In this room we have to produce cabinet heads, three-quarter figures, and full lengths, with groups. A lens of about 8½ or 9 inch equivalent focus requires 13 or 14 feet between lens and figure, for a full length cabinet portrait, and this is the longest focus lens that can be used in such a studio, for groups of three or four figures, if the figures are to be included. Even this would be the utmost that could be done, and would bring the figures very near to the background, necessitating the use of grounds, painted with very soft definition. For three-quarter figures and small cabinet heads, say up to inch and a half, the lens would prove satisfactory; while for rapid exposures with children, especially if working at $f/3$, it would be all that could be desired. It is in the matter of aperture

that the standard lenses show superiority. The focal length—say of 9 inches—would be more than one and a half times the length of the finished cabinet picture, which is generally 5¾ by 4 inches, or, in the case of some of the Mantello mounts, barely 5¼ by 4 inches; while with vignette heads the part of the negative actually printed would hardly exceed 3½ or 4 inches. We have heard pseudo-artists talk about the falsity of the drawing in porportrait heads produced with a lens of 9-inch focus; yet when we look the thing fairly in the face, we see that with a *two inch* head the focal length is *four and a half times* the length of the head. Proportionally, a landscape on a whole plate would be taken with a lens of 36 inch focus, which most photographers would agree should give pleasing perspective! Looked at in this light it is difficult to see how the perspective of a 2-inch head would be improved by the use of any lens which would be of practical utility in the ordinary studio. It must be remembered that it is possible to get too far away from the sitter, to have too great an amount of intervening atmosphere. There are towns where fog and mist are not negligible quantities, and when photographing under such conditions as these words suggest, too great a focal length means serious lack of brilliancy. The shadows are not only veiled over, but it is almost impossible to get the high-lights "tipped."

When we come to heads larger than 2 inches, however, a lens of greater focal length becomes desirable. Perhaps in some businesses, where a fair amount of work is done in whole-plate and imperial sizes, a good whole-plate portrait lens may be bought, of a type similar to that suggested as the best for cabinet work. It may not be possible to use this size of portrait lens at a greater aperture than $f/4$, or even $f/6$ for some work, for it must be remembered that depth of definition is dependent on the *actual* size of aperture, and not on the size relative to the focal length of the lens. Hence, the advantage of the 9 inch lens for rapid cabinet work. A lens of 14 to 18 inch focus is what we should recommend as suitable for work up to whole-plate, while for 10 by 8-inch portraits the latter length is to be preferred. This lens would not only be used for large portraits, but would be of much value for cabinet heads, intended to be printed out plain, which often come larger than a vignette head.

If, however, the imperial portrait be a *rara avis*, the expense of a portrait lens may be considered unnecessary, and recourse may be had to some other lens of similar focal length, already in the worker's possession. Such may be either single view lens, rapid rectilinear, or anastigmatic, and as these remarks may help someone in the choice of a lens which shall serve two purposes, and each well, we will consider the various points of all three.

The rapid rectilinear is the type of lens most likely to be in the possession of the professional, and if he works an out-door size larger than whole-plate, he will have an R.R. of 13½ or 14 inch focus for 10 by 8 inch, or of 18 inch focus for 12 by 10 inch. A whole-plate lens of 10 or 11 inch focus we should consider of too short a focus to give pleasing imperial portraits, but we have frequently used a 10 by 8 inch R.R. of 13½ inch focus for whole-plate work with satisfactory results. We have used this R.R. for cabinet heads also, and a studio of even the restricted size of 20 feet in length, above referred to, would allow of its being used for three-quarter length cabinets, with the advantage that hands and knees are not unduly large.

As to the use of R.R. lenses for portrait work, there are diverse opinions. It is often remarked that modelling is better obtained with a portrait lens proper than with any other. We have always found it difficult to understand why this should be, and are quite unable to detect any lack of modelling and gradation in good portrait negatives made with R.R. lenses. One professional photographer of our acquaintance, an artistic worker of ability, used rectilinears, or euryscopes, for all his work, including cabinets and children's portraits, on account of the more uniform definition he obtained no part of the figure, being so much out of focus. And we know that some of the finest portraiture seen on exhibition walls during recent years has been produced with R.R. lenses.

The only other alternative for most of us is the single or landscape lens, and it is, indeed, a matter of doubt as to whether the R.R. is at all superior to a single lens for portrait work as large as 10 by 8 inches.

With a public growing accustomed to diffusion of focus in portraiture of some size, the professional may almost venture on the use of a single lens, and the amateur, who works to please himself, need not hesitate a moment. Either may purchase at possibly a couple of pounds a single lens of 15 or 16 inch focus, which would serve admirably for portraiture, working at an aperture of *f*/8. Even cheaper lenses, still corrected for chromatic aberration, may be obtained, working at *f*/11, and though this is too slow for studio exposures, the fixed stop—as the late Mr. J. Traill Taylor suggested—may be readily opened out to *f*/8, and in this condition the single lens will give a brilliant image, with softened definition.

If a single lens be required, to serve for both in-door and out-door work, there are higher priced lenses on the market.

Some years ago there appeared in the pages of the *Studio* (May, 1894, vol. iii.) an article by Mr. Ernst Lambert on this very question, and we would urge those who can do so to refer to it, and study the illustrations. To those who are unable to see the article, it may be interesting if we mention one or two of the points raised by Mr. Lambert. Pointing out that no special form of lens will of itself give life-like portraits, he remarks that the student who wishes to make beautifully modelled and softly outlined pictures will find a single lens of very large aperture the best instrument for the purpose. The lens recommended for 12 by 10-inch plates is one of 18 inch focus, working at an aperture of *f*/6. Some of Mr. Lambert's admirable illustrations were produced with the back combination of a very old Voigtlander euryscope. Good results may also be obtained by using the front combination of an ordinary portrait lens, but this, we think, should be mounted at a proper distance *behind the stop*, if stops are to be occasionally used. Possibly the greatest merit of single lenses in portrait work is the depth of the focus. With the largest aperture there will be no part critically sharp—as an anastigmat gives us critical definition—but there will be little or none of that disagreeable loss of structure, or extreme fuzziness, so noticeable in portraits taken with other forms of lenses. Its definition, as Mr. Lambert remarks, is distributed over a deeper field, its sharp rendering is not so sharp, and its out-of-focus rendering less blurred.

Turning now to the third type of lens, the anastigmat, we find a considerable variety. Our aim is rather to consider the fitness of those anastigmats which are perhaps primarily constructed for ordinary landscape and architectural work—for portraiture in the studio.

Although there are differences of opinion as to the superiority of anastigmatic lenses over rapid rectilinears for certain classes of work, there can, we think, be no serious disputing of the fact that for some work they are a long way in advance of any older form of objective. In the smaller towns the photographer has not opportunity for specializing. He must make the best of each separate commission, whatever it may be, and a certain amount of copying of pictures, drawings, plans, and so on will fall to his lot. We have had to execute, and at very short notice, copies of documents, and enlarged copies of portions of plans of estates for legal purposes, and for such work as this the anastigmat is emphatically *the* lens. Again, for some kinds of architectural work, of which we hope to write in a future article, the modern lens scores, and in out-door groups, where the parts requiring sharp focus can be arranged in one plane, much briefer exposures can be given, as no stopping down is necessary to secure marginal crispness. In addition to these advantages the lens is equal to a rectilinear in other branches of work, and will, when stopped down to ordinary wide-angle lens apertures, cover a plate two sizes larger than its own, thus serving as a wide-angle lens on the larger plate. If, then, it can be further used to advantage in the studio, the photographer may well deem it worth buying in spite of its somewhat higher price, especially if he is without lenses, and is providing himself with an all-round equipment.

The number of anastigmats on the market at the present time is considerable, and there is a wide choice in focal length and covering capacity, as well as in relative aperture. Focal length will be a matter for individual decision according to one's own ideas. Aperture is a matter determined by the variety of uses to which the lens is to be put. Varying from about *f*/4 in the Zeiss Planar, to the usual *f*/8 in

other lenses, the selection would be made from among lenses of greater intensity if for frequent use in the studio, while if the instrument be merely required for the production of occasional imperial portraits, where a very large aperture could not be employed in any lens, then possibly a lens working at $f/5.6$ would be the most suitable.

We have recently been trying, in the studio, for portrait work, three of the better known anastigmatic lenses, which have been kindly lent to us for this purpose by Messrs. Ross, Ltd. If we, therefore, mention these lenses it is not in any way to single them out as superior to other makes, but simply because of them we can speak from actual trial. The lenses used were a Zeiss Planar, a Goerz, and a Ross Universal Symmetric Anastigmat. The first, about 17 in. focus, covering a 10 by 8 plate, and working at an aperture of $f/4.5$, a large and heavy lens which if used for landscape work would require an out-door camera of considerable stability. The Goerz, also about 17 inch focus, covering up to 12 by 10 at $f/8$, and the Ross of 15 inch focus, listed for 10 by 8 plates at $f/5.6$, both lenses only slightly larger and heavier than the usual sizes of R.R. to which photographers are accustomed, and available for use on average portable cameras.

It will be noticed that in the three lenses the apertures are graded from the large opening of $f/4.5$ to the $f/8$ of the Goerz, with the intermediate $f/5.6$, and, of course, smaller apertures are available in each case.

We tried first the Zeiss Planar, and took with it a number of cabinet portraits, all three-quarter figure, in standing and sitting poses, and for these the distance between lens and sitter was something like thirteen to fourteen feet. Working at $f/4.5$, the exposures were almost the same as those with an ordinary portrait lens, and the depths of definition at this aperture with the focal length of seventeen inches was ample for cabinet portraiture. One point must be emphasized. It is usual to screen the ordinary portrait lens from stray light, and if this is necessary with a lens including a narrow angle, and mounted in a setting provided with a long hood, it becomes much more necessary when working with a lens embracing a wide angle, and with only a short hood. We found, in fact, that it was best to draw forward the focussing tunnel, which encloses the camera, as far as possible without cutting off from the field of view. When the lens is used for copying purposes, as a wide-angle lens, the lighting may be arranged so that little or no light of any strength reaches it except from the object copied, but in portraiture this is not often possible.

As to the definition, the general effect given somewhat resembles that produced by the single lens at large aperture. Even in a whole-plate portrait there is no serious loss of texture, though taken with open aperture. Portions of the figure slightly out of focus show a soft and even blurring, yet with a suggestion of the distinct line. Light-colored lace on a dark velvet sleeve, if not critically focussed, is rendered fairly sharp, yet with a very slight halo all around, softening the cutting lines in a pleasing manner. *Theoretically*—the contrast should be too great between the sharp definition of parts of the face and figure in the one plane focussed for, and those out of that plane. *Practically*—if care be taken in focussing, and especially in posing, no part of the picture need be badly blurred, and in those few cases where, owing to a difficult pose, the lack of definition amounts to fuzziness, stopping down must be resorted to as with other lenses. It is worth noting, and this quite apart from the use of any particular lens, that the sharper the greater part of the picture is, the more apparent is any lack of sharpness, or any loss of structure.

Perhaps it is in the direction of groups in the studio that the utility of the anastigmatic type of lens is most marked. Ordinary portrait lenses with difficulty give sufficiently good marginal definition even when stopped to $f/6$, but the freedom from astigmatism enables a suitably arranged group of figures to be photographed with as fine definition of the outer faces as of those in the centre. It is usually immaterial if the edges of a portrait head are slightly diffused owing to the astigmatism of the R.R., but it is essential that in commercial groups the definition be uniform. In large studios much may be done by employing a lens of long focus, and utilizing the centre of the field only. But in smaller studios a wide-angle lens must be employed and at as large an aperture as possible.

If, then, the anastigmat will beat all other lenses for group work, prove equal generally, and superior in certain points, to the R.R. for portraiture, and in addition possess the advantages to which we have alluded in our remarks, when used for copying and out-door work, we think it will be admitted that it is a most useful all-around tool, and one which it is worth an effort to obtain.

VENTILATION.

BY PATRICK SAGAR.

THERE is, we are told, an old and widespread idea among Europeans, that business is something totally apart from life —that during his hours of work man is a machine.

Enter the business office of a wealthy manufacturer, and you find a dirty board floor, walls whitewashed or papered with the cheapest of common stock, a few time-worn stools, a desk and a safe. The walls are ungraced by pictures, and hold instead two or three diagrams showing the fluctuations in the price of staples. The man himself, the moment he reaches the office, dons an old coat and a dirty straw hat which he used at the seaside several seasons before.

Perhaps we may forgive the man who banishes all idea of comfort from him, on account of the single-souled manner in which he plunges into his work, and in consideration of his business acumen which sees to it that those who work for him are placed in the most advantageous position for turning out the most work. But there is a man for whom we have less respect, perhaps—the man who thoughtlessly handicaps himself to such an extent that he can scarcely work in comfort. How many of we photographers have ever thought of the dark-room as a place of work in which there should be any such thing as arrangement or regard for comfort. I fear we are all too often like an enlarged edition of the amateur. The amateur reads that he must open his plates in the dark, and he immediately rushes into the coal cellar or into some small closet with a tightly-fitting door. And the professional worker has the same idea, for he makes use of the corner which happens to be dark, and which is usually too small for comfortable working, is only warm in winter because of its lack of air, and in summer is suffocating.

In the dark room some of our most intricate and delicate work is done. As well might we hope to do the best retouching with a feeble light as to do the best negative making in a "pokey" little hole devoid of comfort. The question is a reasonable one, for spring is here, and summer will soon follow. To secure a certain amount of ventilation in the dark-room is so easy that there is no excuse for being without it. The simplest practical ventilator is a wooden box with several partitions in to "trap" the light. Take a box, say nine inches long and six inches square—a box simply made of four sides without ends. In this box a partition is fastened, fitting tightly to the shape of the box, but not quite filling it. This partition is placed across the box, and there is a space of one inch between it and the top of the box. Place this at one end of the box, and in the centre of the box place a similar one, but with the inch space between it and the *bottom* of the box. A third partition placed like the first one will fill the other end of the box. If these partitions and the inside of the box be painted black no light can pass through it. But air will pass in a bent line over the first partition, down under the second partition and over the third partition. This ventilator may be made to any size or pattern required. If a stone or brick can be moved from the side of a dark room a few inches from the floor, one of these ventilators might be fitted into it. Or if a wooden wall, a piece may be sawed out, or the ventilator may go on the door. This will let fresh air into the room, and a similar one placed near the ceiling will carry air out, and so ensure a constant stream of ventilation. This will have a great effect on the comfort of the worker in warm weather, much more than the mere difference in temperature, for close vitiated air is worse than air which is only warm. It will have a big effect, too, in

the drying of negatives if that is done in the dark-room. A negative will dry in half the time if it has a "breeze of fresh air."

It is a big mistake for a photographer to put all his money into making the reception-room and studio cheerful and attractive. He must not cut down on them, but he must reserve a little money and consideration for his own comfort. Don't you think so?

NEWS AND NOTES.

The use of powdered talc or French chalk as a lubricant for wood is not sufficiently appreciated. On new working or sliding parts a little rubbed in with a flannel or small brush will work wonders in the direction of smoother running; and where a piece of apparatus has been laid aside for some time it should always be lubricated in this manner before use. Talc may be objected to as liable to cause dust if used in the fine parts, such as the plate-holder; but this can be entirely overcome by making a solid pencil of the chalk mixed with paraffin wax. Melt the paraffin and stir the talc into it, mixing very thoroughly. If the mass on being allowed to cool shows a slight tendency to crumble it will be about the right consistency. So far from injuring the wood, this lubricant may rather be considered to season it—that is, it will tend to penetrate the pores and so resist damp.

Dr. Vogel answers the question of what to learn in photography. Taking first the amateur, he says: "Let him learn what interests him most, his aim is not business, but pleasure. The dry plate and silver print interest the many, the carbon process a few, but other processes only attract the specialist. For the professional who looks to portraiture, let him study art and drawing, both being indispensable, and even of more importance than chemistry. Retouching is also necessary, and guilty of a multitude of sins, but the public demand it. The collodion process is recommended as an excellent training for cleanliness and exactitude, in which respects it is without a rival, and, although many beginners will not hear a word about it, who knows that orthochromatic collodion emulsion may not yet be used for portraiture? Every printer should learn the carbon process; but there are many studios where the more highly trained operator must do this work himself. Carbon may not be the most suitable medium for all kinds of prints, but it is unsurpassed for transparencies for enlargement. At the Imperial Technical College the carbon process is a necessary preliminary to all photo-mechanical processes. The platinum process is better known, but needs further cultivation."

Shade Printing.—There is a great temptation among amateur photographers, who make contact prints by daylight, to disregard at this time of year the old adage to print in the shade. With negatives of fair or average density it is slow work during the winter months, even when the sun is shining, to get prints in the shade, and in order to expedite matters the photographer is driven to place his printing-frame in the sun, a thing he would hesitate to do in the summer, when the solar rays are at their maximum power. But just now he is tiring of only getting off one print a day (he is lucky in doing that during the greater part of the winter), and so, when a burst of sunlight comes, he can hardly be blamed for taking advantage of it. A word of caution may be given in this regard. The risk of over-printing is increased, and if it is desired to avoid flattening the image—although the proper depth of the shadows has not been exceeded—the omission from the glass side of the negative of a sheet of tissue paper will result in failure to do so. It may be laid down as fairly certain that no matter what quality of negative be used, diffused light (such as is got by pointing the printing-frame toward the north sky) acts in a very different manner to direct rays. Let us suppose that in the one case a properly graduated print results in an hour. If the direct rays are four times as actinically powerful the same kind of print could not be obtained in a quarter of an hour without some precaution such as we have suggested being taken. The rapidity of action of the direct rays through the half-tones and shadows of the negative would be so great that a flattened image would

result. In such a case a slight increase in the opacity of these parts of the negative would reduce the energy of the solar rays in a greater degree than in the high lights. We have put this matter in a somewhat elementary manner before our readers, because we know there are thousands among them who are grateful for a hint conveyed in the very simplest language. The particular hint we are giving may save them committing errors in contact printing at this time of the year.—*News*.

A Famous Motto.—Centuries ago an old and famous nation, looking up at the pillars of Hercules and thinking the sum of all was known, engraved on its coin the twin pillars with the motto above them, *Ne plus ultra.* Later, when one of her own sons sailed out through those gates and discovered a new world, she re-engraved her coin, *Plus ultra*—more beyond.

So it is always. No wise man dare crown the present. It is too soon outgrown. Every scientific text-book in our colleges to-day which is over ten years old is useless. You can buy the old editions of the great encyclopædias for a few cents. There is "more beyond."

Let the professional photographer apply this to himself and his work. Perhaps ten years ago he won the grand prize at his State or at the National Convention. Proudly he went home and inscribed *Ne plus ultra* on his card mounts, in his local newspapers, and wore it upon his personality. But the work of to-day represents an advance upon that of ten years ago—has been outgrown. There is "more beyond."

How is it with you? Are you saying "*Ne plus ultra*" or "*Plus ultra?*" Be sure you get it right.

Old vs. New.—Ever since the so-called freak photographers or new-style men have come into prominence I have taken an impartial stand concerning them and the old-style plain portraiture men. In my estimation neither class is wholly right or wrong.

There is quite a lot of artistic work turned out by the old-style men, but there is plenty of it that is entirely too commonplace, and it seems as if some of them were down in a rut and bound to stay there. Some of these men seem to have no ambition to improve, but, becoming blinded by their own ideas, think that their style cannot be improved upon. Conceit! conceit! what a lot of ignorance is wrapped up in you.

Just because a photographer cannot make a certain class of work pay, is that any reason why he should condemn it?

Some of the fraternity seem to think that just because Mr. So-and-So (who is a leader) says that one class of photography is no good that the statement must be true. The time has come when every ambitious photographer should use his own brains to think with. We will never accomplish very much by letting other men do our thinking. Haven't the majority of us as much gray matter as the so-called leaders, and why shouldn't we use it? What is the use in following blindly after anyone if we have a mind of our own to make use of.

On the other hand, who can condemn some of the artistic productions of our new school men? Surely no one who judges from an impartial stand-point But in spite of the new school's triumphs, it sometimes goes to the extreme, and, instead of something that is artistic and pleasing, it turns out a photograph that looks like it had been pulled through a mud hole and then daubed with a whitewash brush. It is such "works of art" as these that cause so much harsh criticism.

Of course, one cannot blame people for condemning that "crude fuzziness and deadly flatness" that some of the new-style photographers possess. But do the best productions of the new men have these qualities? I think not.

From what I have seen and read I do not think that extremes are good in either case, and if we young photographers will adopt a conservative course we will be able to please any class of customers that may come to us to be photographed.

These are my convictions, and I await with interest any further discussion of the subject.

L. O. HOWELL,
Albuquerque, N. M.

A committee of photographers, clergymen, and "scientists" has just been formed in England to investigate psychic or spirit photography. They seem to be smitten with chronic ghost curiosity over there

THE LIGHT OF EXPECTANCY

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CRITICISM.[1]

BY PROFESSOR A. H. GRIFFITH.

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CRITICISM, bear in mind, is not fault-finding, neither is fault-finding criticism. A man may simply find fault and not criticise in the least, or he may criticise your picture and call attention to its weak points, and his criticism may be a just one, but you do not need to follow it unless you so desire. By all means do not follow anyone, except where you can steal some new idea, some good idea, and apply it to your own work. Yesterday I went down to East Liverpool, Ohio, and visited the potteries there. I watched the men make pottery; then I had a talk with the officers of the pottery, who showed me through their salesrooms. They said to me: "We are constantly hunting for new models, new ideas." Then I said: "Take some of these men and get them out of this machine stuff." I found people out there making old dishes—that is, dishes of an old style that was made five years ago. The same style of dishes we have seen in our hotels, boarding-houses, and homes for a long time. Now I find that people, as a rule, do not like things exactly like other people; they want them a little different. I believe that most people try to get clothes that are not just like other people's. What woman would have her hat trimmed just like her neighbor's? Oh, no, she would not submit to that. It may be a great deal uglier, but then it is a little different, and that pleases her. I thought that when I was down South I would have a look through some of the large potteries. At Biloxi, Miss., there is a man who used to be a blacksmith, but now he is making pottery, and he never makes two pieces alike. Every piece bears the stamp of individuality. Now that man makes pottery only one way, but each piece of his

[1] Read at the Pennsylvania Convention.

work is different, and what is the result: why all over the country they are hunting for George Ohr's pottery, and Biloxi ware is popular. It may be curious, all out of shape, and queer of color, but that is what they want—something new, something different—variety. And that is the way it is in photography—people don't all want the same thing. Now I don't say it is the same in all cases, but it is the general run in photograph galleries; you find too much of the same styles, and there is not enough variety and improvement, until once in a while someone bumps up against you and tells you you are on the wrong track, and you may or may not believe it, and while it is good, yet you see the same thing in nearly every gallery. Michael Angelo lamented that the human figure had been placed in nearly every conceivable position. Now I don't expect you to put people into new positions, but I do expect you to put them in the position that is best suited to them. Everyone has a certain individuality about them. One man walks pigeon-toed with his heels up; another man may have a certain way of standing; another may throw his head back; another may carry his head a little to the side; these are all natural peculiarities. Study the character of the men and women who come to you, and see if you cannot stamp some of their characters upon their pictures, so that you can tell what they are by their pictures. . . . Do not be afraid to waste plates, be generous in their use, but save paper. Waste six, eight, or a dozen plates if need be, and you will find that your work will come back to you, and you will be more than repaid. When you have once gotten a negative such as you want, then begin on your paper, but not until then. Making pictures is just the same as anything else. It is the result of thought and genius, and genius is only another name for hard work, and the hardest working hands will make the best pictures.

By E. L. Mudge.

Now I don't mean that you are to work like a blacksmith, hammering away all day long, making the hot sparks fly around. You can sit down by a rock and fish, and even if you don't catch anything, simply have a hobby, and get away from the gallery once in a while. I like to meet a fellow who has a hobby. You can think out a whole lot of stuff while you are sitting out on a rock fishing. I went down to the wharf last night and waited for that little steamer Ben Hur to come up the river, because I wanted a change. I found out when it would return. They told me 10.30 to-morrow. I watched those young colored fellows loading the cargo on the steamer, and listened to their Southern tunes, the sweet melody of which swept over the water, and that night I dreamed out pictures that, if I could give them substance, would attract and please you. It was a rest for me, a change—just what I needed. We need to get away from hard work once in a while and give our minds a chance to think things out. The man who paints the best pictures is the man who sits down and thinks them out, works them up in his mind. You say: "How about inspiration?" Well, once in a while such a thing as inspiration

comes to you; but the trouble is so many poor fellows just wait around for the inspiration that never comes. I would much rather see you go to work and do something than to sit around and wait for the inspiration that may or may not come. When Turner heard that Wilkie had been buried at sea he went to work to paint the picture of the scene as it appeared in his mind, and before he was through he had placed on the canvas on his easel a picture that you cannot buy for $10,000. That was inspiration that only came once, but it was worth something. Some think that there have been pictures of that style nearly as good, but I doubt it. There has been only one Turner in all these centuries.

I have a dear old mother, seventy-five years old, and when her picture is painted I want her to retain all her personality, for every wrinkle and every gray hair tells of care and sacrifice; they are sacred, and I want them to show in the picture. That is one kind of art. On the other hand, you will find a lady will come to you, and she will want you to make her look just as beautiful as possible in her picture—a perfect ideal, as it were—and if you want to please her you will have to smooth over all the rough places, and bear in mind all the time the capacity of the material you are using. Photography has its limitations, the same as painting with a brush has its limitations. There are certain things you cannot do. You will notice some pictures where the white color glares out, others where the black stands out very boldly; there is not the right blending of the two colors, the amount of light thrown on the pictures has not been considered. Now the light in this room is one hundred times lower than it is out-doors. Bear that in mind, and keep down the white shades more. You can do it if you try; that is one of the tricks of the trade.

Now art is the representation of something in nature idealized. It may be the realization of the ideal, and it may be the idealizing of the real. Study your people and consider the tools you want to use, and get everything in readiness, study all the details. I saw a picture of a blacksmith shop, 14 x 17, on which a great deal of labor had been expended getting it ready to be photographed. Everything had been prepared, new bellows had been put in especially for the occasion, but the man had made one mistake, one great mistake. He had placed the anvil block on a wooden floor like this. Now the very first good hard blow with the blacksmith's hammer on the block would send it clear through that floor. Now these little things

By E. D. Evans.

in a picture must not be overlooked, for they go to make up the attractiveness of a picture as much as the big things; watch the little things around you. You talk to an old soldier about the battles he has been in, and he will tell you he only saw the things right around him. Study to get the effect. Make pictures for $2.00, $5.00, $6.00, and $10.00 a dozen if you may, but show the customer the difference between the $2.00 and $5.00, and you will not sell

him $2.00 pictures again, I can assure you of that.

You must not only study the people whom you have to please, but study the art in pictures, so that when a woman comes into your gallery you can tell by looking at her just how she ought to wear her hair to look best in a picture; study to bring out ease, grace, and beauty. You will find one woman will look good with her hair one way, another woman another way. One person will look best with their hands placed one way, another another way, and so on. One person will take a better picture side view or one-half, another one-fourth, and another full view. Make pictures to hang on the wall in your room or workshop, look at them every day, and compare them with others. If they can hang there for a year and you do not become tired of them, they are pretty good pictures. Now just a little more about studying the people who come to your gallery. This is important, for if you watch closely, after having made a practice of it, you can nearly always tell just what kind of a person you have before you to photograph, what their character and make-up are. You can tell by the manner in which a man comes at you whether or not he is a keen, shrewd business man, or whether he is a professional man, and what kind of a position would be best suited for him. A lady may come to you who has a love for the beautiful and a desire to look as lovely as possible. Place her in the position that will bring out all the outlines of grace and beauty, in a position in which she will look the most easy and graceful, a position that will show forth her character. Another woman may come to you with that business air about her. I am always afraid of those business women. I tell you women were made to be loved and to love back. When she comes to be the cold, calculating business woman the love all goes out of her. On the other hand, if a literary woman comes to you, you can just place her in position, and she will roll her eyes up like a duck in a thunderstorm. When you get a woman who is filled with love and pathos, with a love of humanity and the home, and you get a clear-cut profile of the face, you have a model you can make of it just what you want, and you can make a picture you will not be ashamed of. Study to make your pictures true likenesses of the persons who are your patrons. Watch closely the expressions on their faces and try to bring them out. You may have a lawyer, a good, jolly fellow with a a keen sense of wit about him and the ability to read people at a glance, the quiet, studious professor, or the preacher, and, by the way, some of the jolliest men I ever met were preachers, although some of them like to hang on the outside a little, and not let everyone know they are of a jolly make-up. Do you know I believe heaven will be filled with jolly people who always have something good to tell you, and who can appreciate a good joke. Keep your eyes open and study the beauty of nature around you, and you will find plenty of subjects for pictures, and it will help to develop your talent, and you will get lots of pleasure out of it.

By E. D. Evans.

What can be more beautiful than the last rays of the setting sun. I have known men and boys hurry home at night and get ready and go to the theatre, and I do not wish to deny them that privilege, but at the same time they can see there nothing half so beautiful, nothing half so enchanting, as is to be found out in the world of nature around them. If you people keep your eyes open you have no idea how much pleasure you can get out of your work.

Go around and get acquainted with the different ways of doing things. Go out and see other people's work, and let them see yours, and compare notes if you get the chance. Another thing I want to tell you, when you make beautiful things put them out where they can be seen. It will do you good and will be the means of doing good to others. That is the reason you get so much good out of coming to these conventions. You get together and discuss things, give honest criticism one to the other, and you begin to broaden out and get new ideas which you can carry away with you and develop in the coming months. Be careful to get the best from what you see.

CHILDREN.

BY WILBUR GRÜBEMAN.

By W. W. Cowles.

CHILDREN and babies are among the most frequent visitors to our studios, and they are the class of sitters to which usually least justice is done. And yet success in handling children means success all along the line; for the children will bring the mothers, and where the mothers go the fathers must perforce follow. For pretty pictures there are perhaps more possibilities in the child than in any other sitter, and the photographer whose ideas of baby photographs are limited to a hair-rug and nudity should go and learn better.

Example is better than precept, and in the illustrations given herewith we have examples which are worth careful study. Take first the work of W. W. Cowles, and if you wish to understand the value of that little boy, think of what "might have been." Imagine him in the studio, before a background of forest and river, standing on a grass-mat, and with one hand supporting a rustic fence. His hair is brushed with such painful perfection that we know he had a terrible time with mamma before coming; the figure is flooded with light, and the print is highly burnished. Here we have a natural background—for it is too perfect to be a deception—and we have a lesson in the use of black. That blackness—caused by depth and not by black paint—is not less happy than the "accessory," the bit of door-frame and ends of clapboards. And how the sturdy pride of the young man is manifested, and how cleverly we are told that the pride is in the new pants.

Notice the winsome naturalness of the

two children. They have no photographic expression, but one of acute interest. Here we have all unnecessary matter entirely eliminated—not a single accessory and the background well chosen. The man who turns out such work is a careful artist, and, what is equally important, he can show good photography. To see such work from a small city reminds us of the strength of American work—for it is not dependent on the ability of any ten or any fifty prominent workers, but upon the many men who, working in small places and with but local reputations, do work of the first class.

The three other pictures bespeak an amateur, and such we believe Henry Hall is. Here, too, we have the absence of any sense of being photographed. The little Bhudda-like infant is one solid chunk of intense enjoyment,so intense that some of it is transferred to everyone who looks at the picture. The amateur is suggested in the setting of the subject, for the child is manifestly in the garden. More sedate but equally successful is the child as he plays with his elder sister. The centre picture must surely have been a labor of love. It is one of those things which the average photographer dare not turn out if he would—the sitter does not get full value for her money. But the whole scene recorded is doubtless a familiar one to the photographer, and he has produced one of those pictures which most please those who best know the sitter. A man might not give such work away to friends by the dozen, but it will be his own personal choice.

There is no connection whatever between size and success. These pictures as reproduced here are almost the size of the originals—the largest is not more than two and a half inches broad. Three of them are without accessory—I had almost said without background. The other three have natural settings.

Children are not more difficult to photograph (successfully) than are older people. Their lack of self-consciousness and their natural grace are all in favor of the photographer, if he does not try to substitute attention and pose. The crying baby of legend is not so common as many would have us believe, and where it occurs it is not an insuperable difficulty, unless the photographer, or parent, or both are at fault.

With rapid plates it is easy to combine full exposure with "the instantaneous process," and the plates should be fully, almost over-exposed. When you have got your exposure develop slowly for softness and detail.

An enterprising Britisher announces that his chloride of gold is the best, because made of Johannesburg gold.

It is said that in England, where the department stores who have been working the 99c. price for a dollar article, are in the habit of selling a box of pins for the odd change, which over there is one farthing, equal to half a cent. Now, however, one firm offers a packet of "photographs" instead of the coin.

By Henry Hall.

GEORGE EASTMAN.

In our last number we announced the free-handed, generous gift of Mr. George Eastman to the Mechanics' Institute of Rochester; and now, thanks to Mr. J. H. Kent for his admirable portrait of Mr. Eastman, we have the pleasure of presenting our readers with an excellent half-tone portrait of our esteemed coworker, together with a sketch of his life, for which we are indebted to the *Rochester Post-Express:*

"George Eastman was born in Waterville, Oneida County, on July 12, 1854. He was the son of George W. Eastman and Maria Eastman, and received his education in the public schools of Rochester. His father was the proprietor of the old East-

man Commercial College, having removed with his family to Rochester in 1860, when George Eastman was in his sixth year. In 1861, when the family were living in the old Strong house in Washington Street, which has since become the property of the Mechanics' Institute, the elder Eastman died, and Mrs. Eastman with her two children removed to a house in Livingstone Park. They removed later to Elizabeth Street, then to Jones Avenue, then to Ambrose Street, and still later to Arnold Park. It was not until 1895 that the family took possession of the Soule house at 400 East Avenue, which is now the family home.

"When George Eastman was between thirteen and fourteen years of age he entered the employ of Cornelius Waydell, who was in the insurance business. Later he was with Buell & Brewster, and then with Buell & Hayden, both firms being in the insurance business in the Reynolds Arcade.

"In 1877 he entered the Rochester Savings Bank as clerk, and was successively assistant bookkeeper and bookkeeper. He left this position in 1880.

"It was in 1878 that Mr. Eastman began experimenting in photography with the idea of making a dry plate. He experimented in his own house at first, and began making the plates for sale while he was still in his own house. He began selling dry plates in 1880, and he was so successful with them that he formed a copartnership with Henry A. Strong, who is now President of the Eastman Kodak Company, and under the firm name of Strong & Eastman they continued the manufacture of these plates. He is now the Treasurer of the Eastman Kodak Company, the largest establishment of its kind in the world."

As the new buildings progress Mr. Eastman will send us drawings of them, and our readers shall see them from time to time. We are all interested in the good work doing.

PRACTICAL METHODS AND FORMULÆ.

To Dry Carbon Tissue.—To those who tackle carbon work only occasionally, and who cannot readily obtain the soon spoiled ready sensitized tissue, the sensitizing and drying of tissue is often an inconvenience, owing to the lack of a good drying-room or drying-box. To avoid this difficulty, a simple, but efficient, remedy is suggested.

Each piece of tissue is sensitized in the usual way by immersing in a solution of bichromate of potash. It is then lifted out of this solution and placed, gelatine side downward, upon a piece of ferrotype plate a little larger than the piece of tissue, the gelatine being in contact with the japanned side of the metal plate. Squeegee the superfluous liquid from the back of the tissue. This method of getting a smooth surface upon the tissue is well known.

Each plate, with the tissue adhering to it, is now placed in a paper bag or envelope until dry.

The bag or envelope is, in fact, a substitute for a drying-box. It may be made of any kind of paper which is impervious to light and is not "waterproof." In other words, it must be porous to allow the moisture in the tissue to get through it. The envelopes in which manufacturers put up sensitive paper answer admirably.

At this time of the year, for instance, tissue may be sensitized late in the evening, and the bags containing the plates and tissues may remain on a table in a sitting-room, or other room where there has been a fire during the day, until the morning without any necessity for interfering with the window of the room. In all probability it will be found in the morning that the tissues have dried and have parted from the plates. If the ferrotype plates are polished with the flannel used for polishing the temporary supports, they are much improved.

The bags should be large enough to allow the plates to slide in easily, and, when laying them down to dry, take care that the plate is under the tissue and not the tissue under the plate.

A Negative Varnish which is said to give a very good tooth for the pencil is 1 part each of ether, seed-lac and oil of lavender; 2 parts each of gum sandarac and gum benzoin, and 40 parts of wood alcohol. Dissolve and then filter.

GIVEN a white-haired veteran wearing snowy linen and a black coat and vest. How shall we best get him? We do not want to have our picture simply divided into white and black; we must get all the gradation in the hair and face, and we must show the texture of the coat. The head is our first consideration; the shirt and coat are altogether secondary. The light must, therefore, be focussed most strongly on to the head, usually falling slantwise from above and on one side. If properly handled this will give more light to the head than to the shirt. If the shirt and collar are still too prominent a small opaque screen or reflector can be used to shield them from the direct light. If properly held this will throw them into a delicate half-shadow, where they will not be too prominent, but will at the same time give sufficient detail.

Remember that it is no use to attempt any under-exposure in which much white occurs. An under-exposed negative may be thrown away. Have the light soft and the exposure just as much as possible without getting flatness.

In developing, aim to obtain all the softness and delicacy possible; use a weak developer. Perhaps pyro is the best, using a two-solution developer, so that the developer may be quickly altered as required. Remember, that if you wish to prevent clogging in your lights, the best preventive is due care during exposure.

When the negative is obtained, soft and full of detail, it may be spoiled in the printing. To get the best results print in the shade and under tissue-paper. It is impossible to get satisfactory results from such a negative if it is printed in the sun.

Ferroprussiate prints—the common despised "blue print"—seem to be having quite a little boom at present, and several firms are making a specialty of sensitizing silk or linen fabrics, and on them printing local scenes or amateurs' own views. To sensitize linen the fabric should be thoroughly washed and then immersed in a 1 per cent. solution of hard gelatine and dried, and sensitized with one of the following mixtures:

A.—Ammonio-citrate of Iron	27	parts.
Water	100	"
B.—Ferridcyanide of Potassium	23	parts.
Water	100	"

Add A to B and filter, and keep in the dark. Or the following may be used:

A.—Citric or Tartaric Acid	26	parts.
Water	100	"
B.—Ferric Chloride	20	parts.
Water	100	"
C.—Ferridcyanide of Potassium	22	parts.
Water	100	"
D.—Ammonia	about 40	parts.

Add A to B, and then D, gradually shaking between each addition, and, finally, add C in the same way, and then filter the mixture. To sensitize the linen brush the solution on with a water-color brush. The latter formula gives a more sensitive preparation than the former.

A hard crystal varnish, especially useful when photographs are framed for advertisements or other display purposes, without the protection of glass, is:

Powdered Bleached Shellac	25	parts.
Alcohol	85	"
Ammonia	65	"
Boiling Water	125	"
Glycerine	6	"
Dextrine	0.25	"

The shellac gives the glaze, the ammonia removes any grease from the print, and the glycerine prevents the cracking of the varnish when dry.

The quality of glass used in glazing a studio is not always sufficiently considered. Under the action of light some glass changes perceptibly, and as the change is often toward a yellow tinge it has an appreciable effect on the exposure. To test whether a glass is sensitive to light is very easy in summer. A piece of glass should be cut in two, the one-half laid in the dark, the other in sunlight, and after eight days the two pieces should be compared. Any change will then be readily seen. In winter the arc light instead of the sun may be used by those who possess such an article.

A prize is offered by the French Government for the best telephoto lens suitable for balloon photography. The focus must be from 24 to 40 inches. Evidently photography has its uses in war.

During the winter months the studio should be kept, with the dark-room, at a moderate and uniform temperature.

PORTRAITS OF OLD MEN.

We present herewith two portraits by W. W. Cowles, of Seneca Falls, N. Y., which afford more than one useful lesson in the treatment of this class of subjects. It will be noted that these portraits, while presenting all desirable detail, nowhere hurt the eye with overmuch sharpness, the lines and masses being softened by diffusion of focus and the method of lighting employed. This is a detail of vital importance in dealing with age. The balance of light and shade in each picture should not be overlooked, and the illumination of the shadows has much to do with the satisfaction they yield as we look at them. The poise of the head, too, is well chosen in each case to display the characteristics of the subject, and the general evidence of thought and control exercised in the making of the pictures is altogether pleasing. The tone of the ground used in each instance has been well chosen to give desirable relief and softness to the face, giving roundness and delicacy to the modelling, while preserving the boldness which properly belongs to manhood. There is a vigor and alertness in the lower example which we feel sure is characteristic of the man portrayed, while the quiet thoughtfulness of the man seen in the other example is apparently equally appropriate to the subject. And, when all is said and done, likeness is the prime essential in a portrait. Mr. Cowles has done his part well.

HOLIDAY WORK NEAR WATER.

EXCEPT only those whose residence is near the sea or some great water, everyone endeavors to spend holiday on the edge of the water. And the camera is the usual accompaniment to the shore, where plates are exposed to be developed at leisure after the holidays. Unfortunately, seascapes, or waterscapes, introduce us to a new class of conditions, and past experience may not prove a sufficient guide, the result being, too frequently, disappointment when the plates are developed. In a general sense we all believe that light is more intense on the seashore; when the day is really clear the brilliancy is almost painful. And here comes one of the fallacies. The light is so bright when the sun shines directly on to the water that we can scarcely imagine such a thing as under-exposure. We, therefore, use a small stop and a quick shutter, and, sure enough, we get our lights. But we have forgotten our shadows, and they are solidly black. The whole key of the real scene is light and airiness, and the shadows are lost; but in the print their unwelcome insistance suggests that the print might more easily be turned into a sombre art effort with some such title as "storm brewing." The remedy for what is really under-exposure is a longer exposure, using an orthochromatic plate or a color screen, or both, to keep the glare from overpowering everything.

J. H. Hoffner.

It is said by practical seaside workers that the exposure on a cloudy day should be less than on a day of clear sun. This sounds absurd, but there is sense in it if a cloudy day is not understood to be a heavily clouded or dull day. If the sun is shining on the sea, its light may be reflected from the sea to the under side of the cloud, and the cloud then becomes practically a softener and diffuser of this light, similar to the reflector used in a studio. This diffusing or softening of the light is the key to the paradox, for our shadows are lightening, and if we follow the good old rule of exposing for them, our exposure is reduced.

To those who go in for photographing much expanse of water there are woful disappointments unless a little calculation is made. The large steamboat swinging at anchor looks so very impressive and bulky that, unless we note her carefully on the ground-glass, the result may look more like a gray grasshopper than a massive boat, owing to its appearing about one-third of an inch in length on the plate. It is a good plan to have two lines showing the angle included by the lens marked on top of the camera. A glance will show the proportion occupied by the object.

J. H. Hoffner.

AN APPRECIATION.

AMONG the difficulties with which the editor of a photographic magazine has to contend is the very practical difficulty of making his paper acceptable to thousands of workers who are divided by their work into many special classes, each class having its own peculiar needs and requirements. This difficulty has been the cause of considerable backsliding among several of our esteemed contemporaries, not a few of whom, a few years ago very much devoted to the professional and his needs, are now flying the amateur kite on their front covers and inside their pages, to make sure that if the professional fails in his support they may still rely upon the ubiquitous amateur. We have always kept ourselves free from this particular difficulty by keeping one end always in view—the making of a photographic journal which shall be interesting to all practical photographers, regardless of their special fields. Experience has proved the practical wisdom of our plan, and to-day WILSON'S PHOTOGRAPHIC MAGAZINE is received with equal favor by the professional worker, the amateur, and the specialist in almost every field of photographic application. What the manufacturer thinks of WILSON'S was shown on the inside page of the front cover of our last issue. Reference to the announcement at the same place in this issue will show the opinion of an old and experienced professional photographer. Herewith we present the opinion of a specialist, to whom the MAGAZINE has proved a practical helper in many years of work. These frank expressions of opinion are a great encouragement to us in our work, and we are sure that our readers will share the pleasure we have in them, as well as the spirit with which we give them publicity.

MR. W. M. KEELER.

Government Hospital for Insane.
Washington, D.C., Feb. 20. 1900

My Dear Friend Wilson:
Your "Magazine" is the most looked-for publication on my list of valuable works. During these past ten years of journal, I must confess, I never yet found a "stale" number. There is always something given for the reader—something that the operator can learn. I believe you are one of the best and most alert editors on "our list" of photographic journals.
I have only the best wishes for your success, which you deserve.
Very Truly,
W. M. ~~Keeler~~
Keeler.

~~Pat~~
Pathological & Photographic Department Gov't Hospital for Insane. Washington, D.C.

PICTURE FRAMES.

It is good for us to step outside our own special groove in the domain of art and see what workers on other lines are doing.

We do not refer always, when speaking of artists, to those painter gentlemen who make colored pictures. There are artists in glass, in pottery, in textiles, in metalware, and in fact in every line of work. Some little time ago J. Hunter Donaldson spoke before the Society of Arts on the subject of picture frames. We are a little too apt to choose the latest novelty in frames, rather than one which is quite in the best taste, and which best suits the picture, and the remarks of one who has thought carefully on the matter of framing from a point of view not the photographer's should be able to teach us something. Mr. Donaldson commenced his lecture by tracing the history of the frame, and described some of ancient date.

Not a little of the effect of picture frames depends on their being hung in a suitable light; a side light in a too projecting frame may cast an injurious shadow. Not long ago I saw an exquisitely carved frame and an equally beautiful panel in low relief, placed between the two windows of a room; the work cost £1200, and was practically lost for want of the side light which all such works should have. *Apropos* of this, we may recall the story of Douglas Jerrold and Albert Smith going to a picture gallery. On the stairs was a mirror, standing before which Albert Smith said, as he looked into the glass, "Ah, my boy, there's a picture!" "Yes," said Jerrold, "it wants hanging!" So, when we have a good picture in its proper frame we must not forget that, as Jerrold said, it "wants hanging," and that carefully, in justice to the artist.

We must all have observed the great value of black in frames, especially in works of the Dutch and Spanish masters, sometimes with bands of tortoiseshell on fine lines of gold, with the varied and very characteristic wave mouldings which had their origin in Spain, and were adopted in Italy and Holland, the Dutch artists especially recognizing the suitability of such framings for their paintings. Mr. Watts was among the first to observe this, but, curiously enough, the least happy use of black is perhaps in the large works of Mr. Watts at the Tate Gallery, where, at a little distance from them, broad bands of gold separate, instead of combining the frames and pictures; this rarely occurs in the foreign examples.

Black behind the glass, with gold lines and many delicately moulded gilt frames, gives great charm to many works. The neglect of proper framing by early and very able masters in water color is surprising, in view of the seventeenth and eighteenth century framing known by them, some of their finest works being injured by mean and meaningless surroundings. Men of acknowledged eminence, even in our own day, have not troubled themselves to consider the art of framing.

The most noticeable of English designers of frames is Grinling Gibbons, born in London in the latter half of the seventeenth century. He was recommended by Evelyn to Charles II., who commissioned him to execute the ornamental carving for the chapel at Windsor; he also did the foliage and festoons of the choir of St. Paul's, the baptismal fonts in St. James', Piccadilly, and works at Petworth, Burleigh, and Chatsworth, Hampton Court, etc. His talent was wasted in carving pens and feathers that were mistaken for real ones, flowers which used to move on their stems by the air, etc. We shall all agree probably in thinking such work, however full of loving labor, unsuitable for picture frames, to which it has been applied; the modern English housemaid would soon reduce much of it to matches. On my last visit to Florence I found a fine example of Gibbons' carving in a public museum; and a very ambitious work in South Kensington Museum is his "Stoning of St. Stephen," probably copied from a painting. The rare sense of beauty in natural objects, the manipulative skill, and the tireless industry of Grinling Gibbons will always secure for him a place in the annals of art as our most original frame maker.

As miniatures have always to be examined near to the eye, the effect of any mode of framing has not seriously to be considered; the oval form is obviously the best and most generally used, but the

marked advance of this form of art has led to the adoption of square or oblong frames, generally in ormolu. In nearly all the oval frames there is a gold moulding round the picture, and that flat moulding is burnished highly, so that it is difficult to look at the picture without the glitter of the thing coming to the eye, and it impairs the work. Now, whatever our objection may be to things "made in Germany," it is only just to admit that we owe to that country the introduction of highly finished frame mouldings in color and gold, well suited for drawings, engravings, and the many and beautiful developments of photography; we have "bettered their instruction" with our framings in light and dark oak, walnut, and the shades of stained green, ash, and oak which, with delicate gold lines, give such charm to these latter-day works.

The Americans, too, have entered this field with frames decorated in the "Adam" and "Empire," and other styles, with ornaments laid in gesso, on stained maple, walnut, oak, in tinted ivory, on neutral green, in bronze, on black, etc., of great variety and harmonious effect. The style employed has perfect examples all around us, well known to art lovers, but it has remained for our cousins to glean the field which was sown here and abroad a century ago, and the mezzotints, now so much sought, are charming in these surroundings.

In speaking of an entirely distinct school of painting—the Japanese—Mr. Donaldson quoted:

"The Japanese have two methods: the kakemono, or hanging picture, suspended temporarily only in the house or temple, and otherwise kept rolled up and preserved in the godown, the fire-proof store-room; and the framed drawing hung up in the temple or carried about in processions. In the latter case the frame consists of a simple convex moulding, the width of which varies from half an inch to six or seven inches, according to the size of the picture, and this moulding is painted over with body color with natural flowers, or with geometric patterns, leaving the grain of the wood as a ground, or again with sprigs, leaves, and flowers modelled in gesso. Sometimes the frame is coated over with black or green lacquer, on which geometrical patterns or sprigs of plants are cut through to show the white wood. The more elaborate frames are richly decorated with avanturine lacquer, with geometrical patterns in gold lacquer, and the angles and sometimes the longer sides are strengthened and decorated with brass placques incised with ornament. The drawing in these cases comes close up to the frame, with a border of black or red lines to isolate it from the frame.

"The kakemono, or hanging picture, is mounted and decorated in a conventional manner, which is apparently always rigidly adhered to, and which seems to have existed for centuries. The drawing is mounted on linen or paper, with a margin of from two to four inches on each side, and from two to four feet top and bottom, the lower border being about half the depth of the upper border. At the top and bottom of the drawing is a narrow strip of damask, the upper twice the width of the lower; on each side of the drawing the 3-inch margin is covered with damask or silk of a different color, the depth of the border above (6 to 8 inches) being about twice that of the lower border. Beyond this, above and below, covering the remainder of the mount, is a flowered silk or gold damask ground, with again double the depth of the top, a wood roll at the bottom, with ivory or polished ends, serving for rolling up the drawing; at the top is a semicircular roll with rings to suspend the kakemono. From this upper roll hang two strings or tapes of the same material and color as that of the upper mount, the original object of which is not clear; probably it is a revival of a custom of tying up the kakemono, but they are never missing. The damask or silks which form the borders are, as a rule, of much greater age than the drawing, and it is probable that the professional mounter, or perhaps the owner of the drawing supplies these materials, which are the remnants of ancient dresses either belonging to the family or acquired from actors. The latter, as may be seen from the Japanese color prints, wear the most gorgeous dresses, and, when done with, these would seem to be cut up and utilized, either for the purpose above stated, or as bags for precious pieces of lacquer, ancient tea jars, or masks. In the two examples exhibited one is a Buddhist kakemono, which was probably hung in a temple, the

other has mounts of blue silk and ancient damask, which are really of much greater value than the drawing they frame, and of great beauty of color."

INTERIORS.

BY E. C. MIDDLETON.

NEXT to satisfying the average mother with a portrait of her offspring the most trying subject likely to fall to the lot of the novice is a dark interior here and there illuminated by bright sunshine falling through clear glass upon light columns or other details. No exposure can at once suit such extremes; it will be a matter of compromise, and unless the operator take every care it is more than probable that he will fail lamentably. It must early be realized that the standard developer given by the plate-maker is an average one for, say, the ordinary landscape or the average portrait, but let us realize that the interior is far from an average subject. The contrasts are too great for our normal conditions, and as we can do but very little to alter the subject we must modify our developer, and do all that is possible to bridge over the discrepancy of exposure in our effort to produce an harmonious whole. The plate must be backed, and though the writer has tried many backings, he has not yet found one entirely satisfactory. The backing that is sufficient for a few plates near home is not so satisfactory for use further afield. A mixture of raw sienna "ground in water" mixed with gum, and as much methylated spirit as possible added (to facilitate its drying) is very well for a temporary purpose. It dries fairly rapidly, especially if the domestic foot-warmer be annexed, and the plates are ranged round it in the dark-room, and after exposure it is readily removed with a damp sponge. This easy removal, under other circumstances, is just the trouble. Within the writer's experience any plates backed with a backing that may be removed with ease has only to be carried some distance, and the shaking which the plates get, even when walking, will dislodge portions of the backing and create a dust, as the photographer will discover to his cost. The packing and carriage on tour of extra plates means the same annoyance. If glycerine be added and the backing so kept moist the plates will carry well in the slide for a short journey, but cannot be handled well in a changing bag or casual dark-room, and do not lend themselves to compact carriage; but it is removed with even less trouble than the last. Some light body, as vegetable black, in French polish dries quickly, is easily applied by a brush, is dustless, but is difficult to remove, and there is the difficulty that any backing that will not easily come off when you don't want it to, consistently declines to come off easily when you do want it to. Asphaltum dissolved in benzole to a creamy consistency with just a slight addition of beeswax to prevent it getting chippy is the backing I prefer on plates that have to travel. The plates being placed in the slides, their backs are painted by means of a wide camel's-hair brush; it dries so quickly that by the time the second plate is backed the first will be dry; it will not chip or create a dust, and is clean and convenient to pack and handle. Before developing a pad of cotton-wool moistened with benzole will remove it, a convenient method being to place the plate face downward on a flat surface, covered with a sheet of clean paper; the backing so wiped off shows no tendency to run under the plate.

On entering some interiors one occasionally finds the difference of temperature between outside and inside will cause a condensation on the lens and an obscuration of the image, and it is well to examine the lens under circumstances where this is likely to occur. The point of view is a matter of taste, but few would think of taking up an exact central position. Sometimes a little sacrifice in this direction may be made as the lesser of two evils. Often by selecting something less than the best possible view, a group of trees, houses, or other buildings outside the edifice may be brought between a plain glass window and the sky—or, perhaps, a group of clustered columns, a pulpit, or tomb may, by a slight change of position, be brought in front of some particularly trying window, greatly to the general improvement of the work.

Position being determined upon, if the

tripod should be on some particularly slippery floor, use slips of some such material as cork to put under the feet. Don't use a thick mat, as the writer once did, into which the feet of the tripod gradually sank during exposure and produced, at the end of a tedious hour's waiting, a worthless negative. Using some cushions on a pew seat has been answerable for a similar disaster; therefore, mind the tripod has a substantial footing.

As to exposure, nothing can be said that is likely to be of much service to the reader; it may be anything from seconds to hours, but let it be sufficient.

Modification of exposure to meet unequal lighting can occasionally be effected. Such a subject, for instance, as the enriched fireplace of a baronial hall, which may be nearly opposite a window, which fully illuminates the lower half, but leaves the top in gloom. By pinning to the focussing cloth a piece of paper that will hide the lower half of the subject the exposure will be considerably prolonged, in accordance with the amount of the lens covered, but no sharp image of the edge of the paper will show, and the resulting negative will be more uniform than an ordinary exposure would give; if the paper be placed in position while focussing the shading effect can be seen and regulated.

In developing a generally well-lighted interior free from heavy shadows, the developer needs but little modification. The writer uses a pyro-ammonia developer, believing that for the development of negatives it is at least equal to any and superior to most of the newer developers. Using pyro-bromide and ammonia in 10 per cent. solutions, reduce the pyro by one-fourth for a well-lighted subject, the other proportions being maintained up to the standard formula. The harder or more harsh the lighting becomes the more the pyro must be reduced, until in the worst class, the exposure being a full one, the ammonia in the developer may be increased 50 per cent. as compared with the normal developer, the bromide left normal, but the pyro further reduced to one-quarter the normal proportions. With this solution flood the plate; the detail will gradually appear and extend over the whole plate, but it will be a mere ghost. When the detail appears in the darkest shadows the developer may be exchanged for a normal one, under which the density will rapidly increase to a printing strength, and it can be stopped before the high-lights become clogged up. It is well to have at hand a 25 per cent. solution of citrate of soda. Should the plate show signs of gaining too much strength in the shadows add the citrate solution to the developer in the proportion of one drachm of the former to four ounces of the latter. This will check the shadows and give the high-lights a chance of coming up to the requisite printing strength, and a negative of good contrast will result. Exactly when to change the solution, whether or not to add the citrate, are matters that experience alone can determine, but in the writer's hands the method has given results considered satisfactory. The object is to secure the detail, or as much as required, before density. In the following the usual method of development it will be often found that the high-lights run away and become altogether too dense before the shadows appear, and should the tyro try to bring up the detail with the alkali he will inevitably find his high-lights too opaque.

In focussing on an interior do not assume that the various lines of the building are vertical and accept them as guides. In all buildings there is a doubt (which in old buildings become almost a certainty) that the walls are "out." . . . If the photographer has what is commonly known as a "good eye" he may usually rely on that for placing his screen upright; but this becomes risky when the camera is not on level ground. Should a spirit level be used it is not well to rely on the small toys, often offered, but have one not less than four inches long, which should be tested, as not one level in a score is reliable without adjustment. A bit of fine twine or thread, from which is suspended a pocket-knife or a bunch of keys as a plummet, is at once the simplest, lightest, and most reliable method of securing the vertical position of the camera back against which the plumb line is held.

Where a sun-lighted window of clear glass comes into the view it may be darkened by curtains or a blind, the room being illuminated by the window not in the field of view. Should the interior be of so dark a character as to prevent the proper focussing of the subject, a lighted wax match held by a friend will afford a demarcation

of the extent of the view included, and, discreetly held, may serve as a focussing point, and the interior proper be allowed to take care of itself.

Some of the best pictorial results in interior work have been obtained accidentally and others designed by taking advantage of a momentary gleam of sunlight. Suppose the sun be streaming through a window, casting shadows from the transoms or tracery on the splay of the window. If the exposure be a long one, say twenty minutes or upward, the shadows will move, lose their configuration, and become general, and the extreme illumination in parts will produce difficulties. On the other hand, if the light is diffused by passing clouds, the interior will be easier to deal with, and, on the whole, a better result will ensue. If it be one of those days on which clouds are frequently passing the sun, it will be well worth while making the greater part of the exposure say nine-tenths by diffused light, capping and uncapping the lens according to circumstances, and then completing the exposure with the remaining one-tenth of sunlight. The shadows of tracery will be defined, and the rays of light streaming across will give the work claims to pictorial consideration. In an interior illuminated by more than one source of light, a troublesome window or open door may, if worthy of the trouble, be covered on the outside for the greater part of the exposure, and then a secondary exposure made with the covering removed, and exposure thus equalized.—*The Photogram.*

INTENSIFICATION AND REDUCTION OF LANTERN SLIDES.

BY EDGAR CLIFTON.

ALTHOUGH in the majority of cases the most satisfactory slide is one that is the result of straightforward development and fixation, there are times when one has either to be content with a poor slide or to resort to some process of after-treatment to improve it. The ambitious exhibitor who does not mind wasting—no, we must not say that—using a dozen plates to get one perfect slide from a difficult negative can afford to ignore any tinkering with pictures not up to standard, but to the worker who has a number of transparencies to make in a limited time, any processes which help him to level up his results will be welcome.

When looking over a batch of slides which have been made from negatives of varying quality, it will be odd if there are not a few which are flat and thin, and lacking in the brilliancy which characterizes the majority; while, on the other hand, there may be one or two which are decidedly thick and murky-looking, or perhaps even of the "soot and whitewash" variety. Let us see what can be done with them.

First we must be certain that they are properly fixed, and to this end it is desirable that a liberal amount of fresh fixing solution be used. Plates which appear to require intensification may with advantage be transferred to a fresh dish of clean hypo solution and allowed to remain therein for a period nearly equal to that occupied by the visible fixation. This must be followed by a sufficient washing for, say, half an hour, in running water, or an hour in water changed at least eight times in that period. When this latter course is adopted the slides should be drained as dry as possible each time the water is poured off. The slides may be intensified at once, or dried and put aside to be dealt with at any subsequent date.

One of the most reliable intensifiers is that formerly known as Monckhoven's, but now more generally attributed to Mr. H. J. Burton. It greatly increases the brilliancy of the slide by not only adding to the density of the shadows, but also in a degree clearing away any slight deposit which may obscure the highest lights. It is unfortunately very poisonous in its character, and requires handling with caution. The formula is:

For the Bleaching Solution.

Bichloride of Mercury . .	100 grains.
Bromide of Potassium . .	100 grains.
Water	10 ounces.

For the Blackening Solution.

Nitrate of Silver . . .	100 grains.
Crystallized Cyanide of Potassium	100 grains.
Water	10 ounces.

The solutions will keep for several months, but should not be exposed to light more than is absolutely necessary, although all the necessary operations may be conducted in daylight. They may be used repeatedly, but it is advisable to keep the used solutions in separate bottles, as they become less energetic in their action.

Having prepared these solutions and two perfectly clean dishes, preferably glass, we start operations by filling one of them with the bleaching solution and the other with clean water. The slide to be treated should be soaked in the latter until it is evenly wetted, say for two or three minutes, and then transferred to the bleaching solution, in which its appearance will rapidly change. It will at first become covered with more or less uneven patches of gray, which will in a few minutes give way to an even grayish-white color, which should be allowed to penetrate to the back of the film. When this takes place the plate is removed from the solution, carefully drained, and again well washed, taking the greatest care that no splashes of hypo solution or any alkali come in contact with it. Washing completed, it is ready for blackening with the cyanide and silver, which is allowed to act until the color of the deposit has changed to a brownish-black right through the thickness of the film. The plate should then be immediately removed from the solution and washed for ten to fifteen minutes in running water. If after drying the density is greater than is considered desirable, it may be reduced to the necessary degree by immersion in a very weak hypo solution. This must, of course, be followed by thorough washing, as after fixation.

A less troublesome method of intensification, and one that is particularly useful when warm tones are required, is that in which a single solution containing a salt of uranium is employed. It may be purchased ready for use at most large dealers, or made from the following formula:

Uranium Nitrate . . .	5 grains.
Red Prussiate of Potash . .	7 grains.
Water	2 ounces.

The solution may be used for a number of plates in succession, but does not keep well. The necessity for perfect fixation and thorough washing before intensification is even greater with this intensifier than with the mercury and silver method. The process of intensification is simple, the slide being simply immersed in the solution until the desired tone and density is obtained, and then washed for a few minutes in running water until all the yellowness has disappeared from the high lights. Too long washing will remove some of the deposit.

The reduction of an overdense slide is a more simple matter, and we have two reliable processes differing so widely in their results that we can attack the silver deposited on either the half-tones or shadows at will. To take the first case, we will suppose that we have a slide excellent in all other respects but "thick" or over-developed. To cure this, there is nothing better than the well-known ferridcyanide and hypo, generally known as Farmer's reducer. Various ways of making this have from time to time been published, but for certainty in working and freedom from any stain so necessary with a transparency the following will be found to answer well: Make a solution of hypo 1 ounce, water 20 ounces (clean, not old fixing bath diluted), and taking a sufficient quantity to well cover the plate; put it in a clean measure and drop a bright, clear crystal of ferridcyanide (or red prussiate) of potash into it. It will soon color the solution a bright lemon-yellow, and may then be poured into a clean dish, the plate being immersed and rocked to secure equality of action. This should be done in a weak light, as the solution rapidly decomposes in bright daylight. When the reduction is complete the slide has to be washed in the same way as after fixing. Reduction by this process may, of course, be done immediately after fixing, although a slight washing is advisable if the fixing bath be at all discolored.

The other process, which depends upon the use of persulphate of ammonium, is more adapted for what are generally called "hard" pictures. We may have a slide which is perfectly clear in the high lights, just right in the half-tones, but with patches of inky shadow which utterly spoil the effect on the screen. This can be remedied by immersing the slide for a few minutes in a weak solution, say five grains to the ounce of the persulphate, and stopping its action at the desired stage by plunging it into a 10 per cent. solution of sulphite of soda. The effect is most remarkable,

any buried detail in the shadows making its appearance without the least loss of density in the more delicate parts of the picture. It is necessary that all trace of hypo should be removed before treating with the persulphate solution, which should be freshly made.

Points to be noted in order to secure success in any operation connected with transparency work are absolute cleanliness of measures, dishes, and fingers, freshness of solutions, and if any after-treatment is required perfect fixation and adequate washing.—*Optical Lantern Journal.*

ELEMENTARY CARBON.

WHAT is the best book on carbon?" "How can I learn carbon printing?" "Is carbon profitable?" Such are a few of the questions which most frequently reach us. It is perhaps a little difficult for a man in the centre of things in one of our large cities to appreciate the troubles which beset the man in the country. But away in the small cities the getting hold of a new process is no light task. It is one great point in favor of the American worker that he is always in the front when anything new comes up, and sometimes he is almost in the position of a man born a few generations too soon; for he gets ahead of public opinion and appreciation, and has to educate it to overtake him. In the case of carbon he saw its possibilities more than thirty years ago, and tried to work it. But the process was more intricate then, and the public was callous, and altogether the poor photographer got rather a notion that carbon was more bother than it was worth. But now many of the difficulties of carbon are overcome, and many of the public can appreciate that it is a good thing, and it is becoming more widely known every day. In spite of this there are dozens of photographers who write, either asking how to work carbon or where they can get an "O. K. carbon worker;" and for everyone who asks there must be a score who think, but don't ask.

Do not think that carbon is the one thing needful; it may not be suitable for all businesses, and it is no thing of beauty if it is badly worked. Carbon requires a good negative, and it is more difficult to work than a print-out paper. It must be personally attended to, and not left in the hands of an assistant. The results are appreciated by the more educated classes of people, and this, of course, means that only the best work goes—and, of course, at a proportionate price. The cheapest *good* carbon I have seen was twelve dollars a dozen, and the prices run very much higher in some cases. So carbon may not be the best thing in a studio where two dollars a dozen is an average price, for there is no advantage in working a difficult process if it is beyond the means of the customers.

In carbon work the image is formed by a finely-powdered pigment held in gelatine, rendered sensitive to light by bichromate of potash. The pigment first used was finely-powdered carbon, but almost any color may be obtained by using a suitable pigment. Carbon as a pigment is permanent, and the colors issued by the manufacturers of carbon papers are chosen with the same view, or where there is a demand for some color which will not last the makers are careful to mention that it is not permanent. Brown and sepia papers and the "warm" and "engraving" blacks are unchangeable.

Carbon tissue, as it is called, is a sheet of thick paper coated with pigmented gelatine. All beginners will find it necessary to buy the tissue rather than make it, and as they become more expert they will continue to buy it. The tissue comes unsensitized, and it is sensitized by floating it in a solution, usually about 5 per cent., of bichromate of potassium in water. The paper is then sensitive to light, and the action of light will make the gelatine film insoluble.

To make a print a piece of tissue is sensitized and then hung up to dry in a cool, dark room. The negative is provided with a "safe edge," simply a narrow border of black paper or of hard black varnish, gummed or brushed around the edge of the negative. This safe edge protects the margins of the print from light, and so they remain soluble; otherwise they would pucker or frill in development. There is no visible alteration on the paper during

printing, and so the time must be judged by means of an actinometer. Your stockhouse will let you have one with full instructions for using it, and it will cost about a dollar.

When the printing is finished a piece of similar paper, but coated with insoluble gelatine only—no pigment coloring or sensitizer in it—is placed, together with the print, in a dish of cold water. As soon as both papers are limp their faces are placed together; they are placed on a level or slightly sloping slab and covered with a waterproof cloth. A squeegee is then passed good and hard over the rubber cloth to squeeze the two gelatine faces into close contact. Remember that a roller squeegee is a pretty thing for an amateur or for light work, but that when out for business a good hard-rubber flat squeegee is the best. The squeegee should be worked from the centre to the edges of the print, and when perfect contact is obtained the rubber cloth is removed and the sheets placed under slight pressure for ten or fifteen minutes.

To develop, the sheets are placed in water at about 100° F. The pigment will soon begin to soften around the edges, and in a few minutes the original backing can be peeled off. This leaves the gelatine attached to the transfer paper to which it was squeegeed, and it looked like a jellified mass from which it would be impossible to obtain anything but failure. Lift this from the water and lay it on a flat board or sheet of glass and pour warm water over it. This may be done in white light, as the tissue is only very slightly sensitive when wet, If the tissue has been underexposed it will come up too quickly, and colder water should be used. If it has been overexposed the water must be hotter to help it along. The print is fixed by immersing in an alum bath for ten or fifteen minutes and then washed in cold water and hung up to dry. Although a really good carbon printer is a scarcity, the first elements of success are as easy of attainment as reading this article is, and after that it is a matter of care and experience, especially of care. This is what is called the single transfer method, and its only defect is that it transposes the picture. In most photographs this is no disadvantage, but there are cases where it is a really awkward limitation, as, for instance, with a violinist, who might hold the instrument in the wrong hand, or in case of a lady full length and showing a wedding ring on her hand; for, of course, the transposition makes the left hand appear as right hand and *vice versa*. We have, therefore, sometimes to transfer the picture twice on to support. This "double transfer," as it is called, is done by first squeegeeing the sheet on to a piece of plate-glass called the "temporary support." This has been first coated with a solution of wax in turpentine. It is treated exactly the same as the single transfer method, except that when it is finished and placed in the final cold water another transfer paper is soaked in the water and squeegeed down onto it. When this is dry the temporary support can be stripped from the other, owing to the waxing solution which was applied to it, and the picture appears on its final support non-reversed. Instead of the glass, paper may be used; and all the different papers, single and double, transfer tissues, etc., can be obtained commercially either in rolls or any required size. This is simply the briefest outline of the process. There are many books describing the different uses and adaptations of the process; and it has been more or less fully described in various former numbers of this MAGAZINE. If the pigment chosen is right (and most of the pigments obtained commercially *are* right) the prints are absolutely permanent. It gives wonderful gradation and depth in the shadows and also gives pure whites. Properly-made carbon prints are the most beautiful of photographic products.

WHERE vulcanized rubber articles, such as developing gloves, are kept without being used for some time they are liable to dry and crack. Keeping them immersed in a weak ammonia solution is said to prevent this.

SILVER STAINS on negatives are a constant worry to careless workers, and sometimes to careful ones. There is no absolutely certain cure. One of the best remedies is bichromate of potash, 10 grains; common salt, 40 grains; water, 2 ounces. Soak the plate in this for twenty minutes, then wash thoroughly and immerse in ammonium sulphocyanide, 40 grains; water, 2 ounces. Lastly, wash well.

STANDARD HYDROKINONE FORMULÆ.

In the following formulæ, issued by our leading plate manufacturers, Hauff's hydrokinone is intended:

Seed's Hydrokinone Developer.—

A.—Hydrokinone Hauff	.	1 ounce.
Sulphite of Soda (crystals)	.	5 ounces.
Bromide of Potassium	.	10 grains.
Distilled or Ice Water	.	55 ounces.
B.—Caustic Potash	.	180 grains.
Water	.	10 ounces.

To Develop. Take of A, 4 ounces; B, ½ ounce. After use pour into a separate bottle. This can be used repeatedly and with uniformity of results by the addition of 1 drachm of A and 10 drops of B to every 8 ounces of old developer.

In using this developer it is important to notice the temperature of the room, as a slight variation in this respect causes a very marked difference in the time it takes to develop—much more so than with pyro. Temperature of room should be from 70° to 75° F.

Metol-hydro Developer.—

A.—Water	.	16 ounces.
Metol	.	30 grains.
Hydrokinone Hauff	.	30 "
Sodium Sulphite, dry	.	120 "
B.—Water	.	16 ounces.
Potassium Bromide	.	15 grains.
Sodium Carbonate, dry	.	120 grains.

If the crystallized sulphite and carbonate are used, take twice as much of each as the formula calls for. To develop, take equal parts of A and B. Developer should not be lower than 75° F. in winter and not higher than 70° F. in summer, and can be used repeatedly, but should be discarded as soon as discolored, as it will then stain the film.

Cramer's Hydrokinone Developer.—

No. 1.—Distilled or Ice Water	.	25 ounces.
Sulphite of Soda (crys.)		3 "
Hydrokinone Hauff	.	¼ ounce.
Bromide of Potassium	.	¼ "
No. 2.—Water	.	25 ounces.
Carbon. of Soda (crys.)		6 "

Mix 1 and 2 equal parts in use.

Metol and Hydrokinone Developer.—Thoroughly dissolve:

Metol	.	¼ ounce.
Hydrokinone Hauff	.	¼ "
In Water	.	80 ounces.

Then add in the order given:

Sulphite of Soda (crystals)	.	4 ounces.
Carbonate of Soda (crystals)	.	2½ "

To prepare this with hydrometer, mix 20 ounces sulphite of soda solution, testing 60; 20 ounces carbonate of soda solution, testing 30; ¼ ounce metol, ¼ ounce hydrokinone, dissolved in 40 ounces of water.

For summer use dilute the developer with an equal quantity of water; also for large plates, so that the development does not proceed too rapidly and can be properly controlled. *If negatives of less contrast are desired, use less hydrokinone and more metol. This developer keeps well.*

Hammer's Metol and Hydrokinone Developer.—

No. 1.—Pure Hot Water	.	80 ounces.
Metol	.	1 ounce.
Hydrokinone Hauff	.	⅛ "
Sulphite of Soda (crystals)		6 ounces.
No. 2—Pure Water	.	80 ounces.
Carbonate of Soda (crystals)		5 "

To develop take:

Pure Water	.	2 ounces.
Solution No. 1	.	1 ounce.
Solution No. 2	.	1 "

Eikonogen Hydrokinone Developer.—

No. 1.—Pure Water	.	64 ounces.
Eikonogen	.	1 ounce.
Hydrokinone Hauff	.	⅛ "
Sulphite of Soda (crystals)		2½ ounces.
No. 2.—Pure Water	.	64 ounces.
Carbonate Potass., dry	.	2½ "

To develop take:

Solution No. 1	.	2 ounces.
Solution No. 2	.	1 ounce.

And old developer (solution previously used) in sufficient quantity to produce the best results.

If you would keep your health, see that your dark-room is well ventilated.

An ingenious way of saving a print which is apparently ruined by blisters is to squeegee it into a sheet of finely-ground glass well cleaned with powdered talc. When dry, peel the printoff, and the fine mat surface caused by the glass will hide any mark of broken blisters.

KNOWLEDGE.

BY F. BENNETT.

"IN oratory one not only must know how to use the voice and body, but must also verse himself in the elements of a liberal education. So in photography, an artist must learn not only how to pose the people, but must acquaint himself with all the principles which form an education —therefore read up." This quotation turned up among some old papers which I destroyed when moving to a new house a few weeks ago. I believe I copied it from a number of the PHILADELPHIA PHOTOGRAPHER way back in the seventies. At least I know it was many years ago. That pointer, "read up," has proved so useful to me that I must pass it on to the young generation—I was among the youngsters when I first read it. I suppose I must have spent between $300 and $400 on photographic books and magazines during the last fifteen years, and it has all come back to me many times over. The first book I ever got hold of was Bigelow's *Artistic Photography*. How that book would amuse the photographers of to-day, with its quaint, old-fashioned gowns, and its carpets and curtains so full of patterns. But it did me lots of good, just because it opened my eyes and set me thinking. Then I got a copy of *Photographics*. Did you ever try to read that book through and know it all? You might as well try to get through Shakespeare or Robinson Crusoe at one sitting. I read over that book all one winter, and the more I read it the more I found in it. I dare not begin to mention the other books I read, or I should fill several pages of the MAGAZINE, and that would not do, as those books are read no more. I always read one or more magazines, American and British, and so I always contrived to keep in touch with everything new. What was the result? When there was any novelty I was ready to welcome it half-way. There was talk about dry plates, and I for one thought that wet collodion would hold its own. But, thanks to my being well informed on what was happening, I did not let my belief become prejudice, but I was ready to try, and as a result I was one of the first to use dry plates. I made a big scoop by going strongly on mat paper when double albumenized burnished prints were all the fashion. I was doubtful when I tried it, but was much surprised to see how the people took to it right away. It gave me the lead in my town, and that is an event of a lifetime. That one thing would pay for every cent I ever paid out for books. I took up platinum paper and aristo-platino and tried most new things. The frontispieces in WILSON'S put me on to Velox, which I had always considered a good thing for the amateur, but I quickly found that a professional was lost without it.

Twenty years ago we could keep track of one thing; now we have to keep track of twenty. There are new processes springing up every day, and I like to be informed. I get it all from my magazines or from little books. I do not think that a man need dabble in everything if he wishes to be up to date, but I do think that he should be informed. I have read a good deal about such things as gum-bichromate, but life is too short for me to tackle it. Gum may be a very fine thing —I believe it is—but if I gave my customers things like some of the monstrosities I have seen, I fear that even my affidavit that they were works of art would not save my business life. I like to see the high art effusions of the latest (amateur) school, much, I suppose, as my boy likes to watch the gambols of his pets in the back yard—a kitten, a mud-turtle, and two hop-toads.

There are new developers coming up every year, and I like to know about them all. And yet I am content to stick to pyro. But sometimes a really good thing comes along. I tried ammonium persulphate as a reducer, but it would not work. At last I learned that the difficulty was in getting the genuine chemical, and I got a friend to bring me a little from Europe. It worked all right. I believe that everyone who wishes to get on should read. And how easy it is nowadays! There are little books now at twenty-five cents which contain more real solid meat than any dollar one I have ever read. Whatever subject is new or of interest has its own book, so no one need remain in ignorance.

DEVELOPERS, OLD AND NEW.

BY C. H. BOTHAMLEY.

(Concluded from page 227.)

THE next slides are negative plates of various kinds which have been exposed behind a scale of various opacities and developed with hydramine. It is what is known as a rapid developer; you will notice that all the detail has become visible up to the very last number of the scale of opacities before the earlier numbers have become anything like really opaque. If the developer contains a little potassium bromide there is a distinct restraining effect —the image does not appear so rapidly, and the scale of gradation is shorter; in the examples shown there is a very distinct alteration in the gradation by the addition of half a grain of bromide to the ounce of developer.

I have applied this developer to bromide paper, using the solution described above, the same solution diluted with an equal quantity of water, and the same solution diluted with twice the volume of water; in all these cases there is a slight tendency to fog, and this applies to more than one kind of paper. If the hydramine developer is diluted with an equal volume of water, and half a grain of potassium bromide is added to each ounce of the mixture, the whites of the bromide papers remain perfectly clear, and there is exactly the same kind of alteration as in the case of negatives, the scale being shorter and the prints more vigorous, and we shall see presently that exactly the same thing holds good with lantern plates. Hydramine, used in the strength I have mentioned, without any bromide tends to give flat bromide prints or lantern slides very full of detail, and by adding potassium bromide considerably increased contrast is obtained. The hydramine solution has no staining properties similar to those observed with diamido-resorcin.

Hydramine, then, is, first of all, a substance of an entirely new class, and it presents certain points of resemblance in its mode of action as a developer to some well-known substances, such as metol and amidol. It is considerably influenced, as I have shown, by potassium bromide in the direction of giving increased contrast, and thus admitting of a very appreciable amount of control.

ADUROL-HAUFF AND ADUROL-SCHERING.

The next two developers about which I have to speak are first cousins of a very old friend of ours—hydroquinone, or quinol; and here again we have a new class of developer. They are what chemists call halogen substitution derivatives, and their formulæ are as follows:

$C_6H_4(OH)_2$, hydroquinone or quinol. Molecular weight 110.
$C_6H_3Br(OH)_2$, bromhydroquinone (adurol-Schering). Molecular weight 189.
$C_6H_3Cl(OH)_2$, chlorhydroquinone (adurol-Hauff). Molecular weight 144.4.

Adurol-Schering is formed from hydroquinone by the displacement of one of its hydrogen atoms by one atom of the element bromine; its systematic name is bromhydroquinone. Similarly, adurol-Hauff is formed from hydroquinone by the displacement of one of its hydrogen atoms by an atom of the element chlorine; its systematic name is chlorhydroquinone.

It is important to notice that the relative weights of the chemical molecules of these substances are different. The molecular weight of hydroquinone is 110, of adurol-Hauff 144.4, and of adurol-Schering 189, so that if we want to have in a solution the same number of active chemical molecules of the substance, we must take either 10 parts of hydroquinone, 13.1 parts of adurol-Hauff, or 17.2 parts of adurol-Schering. If we compare equal weights of the substances we are not making a correct comparison from the chemical point of view.

Hydroquinone in a simple solution in water is not a developer, so far as I know; but I have obtained evidence—and I think it is satisfactory, though I mention it with reserve—that a simple aqueous solution of adurol-Hauff, and a simple aqueous solution of adurol-Schering, have slight developing power even when they are very faintly acid, and that is a distinctly new fact for this particular class of developer. Just as

hydroquinone acquires developing power when used with sodium sulphite, although that developing power is small, so the adurols have developing power with sodium sulphite alone. The next slide is a plate developed with a solution of adurol-Hauff and sodium sulphite, without any alkali. That expression, "without any alkali," is used in the chemist's sense; it was not the ordinary sodium sulphite of the shops, but sodium sulphite that had been carefully treated for the removal of any alkali. The plate was really in the liquid twenty-two hours, but as square No. 14 was distinctly visible after two hours, development was probably complete in about six or eight hours. The whole scale is developed out, and there is very great opacity in the high lights; but the plate is fogged, as plates always are if you leave them for a long time in a developing solution containing as much as 5 per cent. of sodium sulphite. It was also partly fixed, owing to the solvent action of the sulphite on the silver bromide.

The first point about the adurols is that they, like hydroquinone, alter very little indeed by exposure to air. Secondly, they are more decidedly soluble in water than hydroquinone, and adurol-Schering is decidedly more easily soluble than adurol-Hauff. Then, whereas, hydroquinone with sodium carbonate is a feeble developer, adurol-Hauff and adurol Schering with sodium carbonate are developers of considerable power. With potassium carbonate, again, their developing power is greater than that of hydroquinone, and in both cases adurol-Schering is a more powerful developer than adurol-Hauff, whether you compare equal chemical molecules or equal weights, which is very important. Then, everyone knows, I think, that in cold weather it is almost impossible to obtain satisfactory development with hydroquinone; but although, like most other developers, the adurols are influenced by temperature, they are not influenced by it to anything like the same extent as hydroquinone. When I speak of a developer having more power I mean that the image appears more quickly, and that the development is complete in a much shorter time. I do not mean that the one will develop out more detail than the other, provided that you *allow sufficient time*. How much detail can be developed out is a question of exposure rather than a question of the developer.

In the negative slides that I show you the developer was in all cases adurol, with an alkaline carbonate. It is quite unnecessary to use a caustic alkali with adurol, though it is necessary to use caustic soda or caustic potash with hydroquinone to get a really powerful developer. The adurol-Hauff developer contained 1.3 per cent. of adurol-Hauff, 5 per cent. of crystallized sodium carbonate, and 5 per cent. of sodium sulphite. I have not a slide developed with hydroquinone, because a corresponding hydroquinone solution, acting on a corresponding plate at the same temperature and for the same time, did not develop a trace of the image. The next slide was developed with adurol-Schering under precisely the same conditions, the temperature in each case being 7.5° C. (45.5° F.), and the next series of slides was developed at a temperature of 16° C. (61° F.). Equal weights of the respective developing agents were used, and also equal chemical molecules, and it will be seen that either with equal weights or equal molecules the developers arrange themselves in this order of activity, beginning with the lowest—hydroquinone, chlorhydroquinone (adurol-Hauff), bromhydroquinone (adurol-Schering).

The next question is, How far are these developers affected by potassium bromide? The general effect of bromide is much the same as with hydroquinone—shorter scale and greater contrast, but is less marked. Hydroquinone is exceedingly sensitive—inconveniently sensitive—to the action of bromide; adurol-Hauff and adurol-Schering can be used with potassium bromide in a more satisfactory way. As regards the development of negatives, I think it may be said that the chief advantage of the adurols is that with the alkali carbonates they give very fairly rapid developers; there is no need to use caustic soda or caustic potash. They are also easier to make up, owing to their greater solubility, and they are not affected by the low temperatures to anything like the same extent as hydroquinone. Adurol-Hauff and adurol-Schering can be used comfortably enough, as regards time, in any weather, which is not the case with hydroquinone.

When these developers are used with bromide paper analogous results are ob-

tained. Here are three pieces of bromide paper of the same kind, exposed and developed for the same time, with solutions containing molecular proportions of the three developers. The temperature was about 50° F., and the activity of the developers increases in this order: hydroquinone, adurol-Hauff, adurol-Schering. Here is another bromide print which was cut in two after exposure, one-half being developed with adurol-Hauff and the other for the same time with adurol-Schering; the latter is much more fully developed than the former. The temperature was the same in both cases, and the composition of the developers was the same, except that one contained adurol-Hauff and the other an equal number of molecules of adurol-Schering. These two substances are distinctly useful as developers for bromide paper. I am not prepared to say that they possess any great advantages over other developers, except that in my experience they give an image of a better color than hydroquinone and work much better in cold weather. They are distinctly useful for developing prints when you wish to obtain the maximum possible amount of contrast. I will pass round, first of all, two prints on the same kind of paper, exposed for the same time, and developed with adurol-Hauff and adurol-Schering, and you may be interested to compare them with the corresponding print developed with hydramine. Then there are other examples developed with adurol-Schering. I do not wish to imply that the latter is better than adurol-Hauff for bromide paper, but I pass these round to show the kind of result that can be obtained.

I have applied each of these developers to lantern slides, with the exception of diamido-resorcin, which, for the reasons already stated, did not seem likely to offer any advantages. I found that for the development of lantern slides the hydramine developer should be diluted with an equal volume of water, and should, as a rule, have added to it a small quantity of potassium bromide; but if you have a very hard negative, and want to get a reasonably soft slide, then the hydramine without bromide is distinctly useful. In all the slides made with this developer the tendency is to softness, with a great deal of detail, and the color is gray.

The alkali used with both the adurols was sodium carbonate, 5 per cent., with sodium sulphite, 5 per cent., and you will see that the slides (on two different kinds of plates) have a good, warm color, and are on the whole distinctly satisfactory.—*Camera Club Journal.*

OUR PICTURES.

VARIETY in subject and treatment is the keynote of the month's illustrations. They come from widely separated studios, and our amateur friends share the honors with their professional coworkers. The frontispiece is from a Michigan subscriber, Mr. J. M. Reidsema, of Kalamazoo, whose photographic growth we have watched with interest for some years. Mr. Reidsema is one of the "coming men" in his State, and has secured prizes for his portrait work at the State conventions. His studio is the only ground-floor gallery in Kalamazoo, and is daintily as well as practically appointed. The skylight is of the single-slant variety, and Mr. Reidsema tells us that he finds it fully equal to all demands made upon its capacity. Mr. Reidsema began business some thirteen years ago, after serving an apprenticeship (in the studio where he is now established as proprietor) with Mr. A. Van Sickle, now demonstrator for the M. A. Seed Dry Plate Company. A necessary following of this is that Mr. Reidsema is a constant user of Seed plates and pyro developer. He has won a fine patronage and the respect of his fellow-citizens by his earnest endeavor to put out good work and meet the wishes of customers. His show windows are always attractively dressed, and during a recent visit we found him busily occupied with a happy crowd of customers.

The engravings representing Mr. Evan D. Evans, of Ithaca, are chosen from his last convention exhibit and some of his later work. We have long admired Mr. Evans' skill in portraiture, and are pleased to bring these evidences of it to the eyes of our readers.

The two little views by Mr. J. H. Hoffner, of Detroit, are selected from a small

collection of his work sent us by our old friend Jex Bardwell. They do honor to their maker, and we use them to give point to the article which they accompany.

The portrait of Dr. Lincoln comes from an old subscriber, Mr. E. L. Mudge, of Chattanooga. The subject was a well-known character in that city, and is supposed to have been related to President Lincoln.

The interesting trio of child pictures by Mr. Henry Hall came to us in a bundle of hand camera prints, and we thought them too good to pass without comment. The suggestion they offer of the attractiveness of natural (out-door) backgrounds for pictures of children of tender age is a detail often lost sight of. The general treatment of the little subjects is altogether happy.

Mr. Cowles' children's pictures and his portraits of old men are referred to elsewhere. They have that quality which makes them "grow upon one" after acquaintance, and teach the value of simplicity in an attractive as well as a forcible way.

THE PENNSYLVANIA CONVENTION.

THE fourth annual convention of the Photographers' Association of Pennsylvania met at Pittsburg, May 1st, under the leadership of President J. B. Schriever (Emporium). It was a rousing success from every point of view. Every county in the State sent in exhibits, and the attendance was larger than at any previous meeting of the Association. The local reception committee, headed by Mr. Robert Morrison, David Rosser, and Mr. Baird, had prepared an elaborate programme, and all the various features of the convention gave the utmost satisfaction and pleasure.

The Mayor of Pittsburg, Hon. W. J. Diehl, welcomed the craft in an enthusiastic speech, to which Mr. C. H. Smith responded on behalf of the Association. President Schriever then gave the annual address, of which we give part here:

"In looking over the exhibits on the wall I see many improvements in your work over last year. I have taken particular notice of the fact that some of the older photographers have taken a new interest in our convention, and evidently have come to the conclusion that it pays to attend our meetings. In the past the most perceptible advancement was made by the younger element. I am pleased to see the very exquisite exhibits by our amateur friends. Many pictures in that department would do credit to any professional. The great craze for picture-taking, which has spread all over the country, has brought the practice of photography in contact with some very bright minds, and we must not be unmindful of the fact that some of the most artistic work of to-day is done by the amateur. Some very artistic people have accidentally, I might say, become interested because of the fact, and becoming interested have developed their latent ability along artistic lines, all of which I contend is a benefit to the professional photographer, who has perhaps neither the time nor the means to go into the details that the artistic amateur would have. With the three years' experience I have had as a member of your Executive Board I realize the necessity of some provision being made for the raising of more funds with which to conduct our conventions more successfully.

"As for our membership, we have about as large a membership now as we ever will have, so there will be no increase in funds from that source. I would, therefore, suggest that we invite some of our neighbor States to join us—say West Virginia, New Jersey, Delaware and Maryland, and make our present Association a District Association. The expense of conducting a convention will not be any more, practically speaking, than it would be to hold a State convention, and we would have about three times the attendance we now have Stock men and manufacturers will indorse the idea, for their expenses attending these conventions are very large, and it does not really pay them to be present. However, if they could meet the trade of three States at one convention, they could profit by it. As for the prizes, we could have a separate list for each State, and a grand prize over all.

"I recommend that we send a letter to

the National Association to be read at their next meeting at Milwaukee, the advisability of adding a new class to their competitive list, to be known as the States' Association Class. The class should be made up of the first prize winners in the highest portrait class of each State Association, and enter into competition with other States in the State Association Class.

"The winning prize should be a loving cup, the award to go to the winning State Association; the individual owner of the exhibit receives the cup and holds it until the next meeting, when he delivers it to the president of the State Association, the cup to be on exhibition and one of the attractions of this convention. After the convention the cup should be taken charge of by the president, and held until the next National Convention, when he send it to that meeting to be competed for again. Any State winning the cup three times can hold it permanently. In addition to the prize received by the State, the individual who made the exhibit should receive a medal for his reward.

"I feel satisfied that this one class will supply the cream of all the exhibits at the National Convention, and will create a rivalry between the different States, and will prove very interesting and profitable to both associations."

After remarks by members, the president's suggestion as to a District Association was placed in the hands of the Association's officers with power to act.

The report of the treasurer, Mr. W. I. Goldman, was then read. It showed a balance on hand in 1897, time of first convention, $142.25; 1898, time of second convention, $10.19; 1899, time of third convention, $21.00. The report was accepted by the Association and the session was adjourned.

At the second session the report of the Nominating Committee was read and officers for 1900–1901 elected, as follows: *President*, David Rosser, Pittsburg; *First Vice-President*, Alfred Holden, Philadelphia; *Second Vice-President*, T. B. Clark, Indiana; *Secretary*, W. E. Buehler, Philadelphia; *Treasurer*, W. I. Goldman, Reading.

Mr. Alfred Holden then gave his experiences on the benefits of attending conventions. Among other points mentioned he said: "Five years ago I attended my first convention. Up to that time I was just sliding along doing anything the 'boss' told me to do. I was confined within the narrow limits of my own little sphere of work, with no chance to branch out or broaden. At that convention I saw the advancement that was being made by photographers all over the country (this was a national convention) and an enthusiasm was kindled within me, and the matter was presented to me as looking in a glass as I listened to the many technical points that were brought out, and something said to me: 'Can you not do something for the other fellows around you, those who perhaps are not considered as far up as you, or in a certain sense beneath you; can you not do something to help those other fellows? You have received good, cannot you extend a hand to him, and bring him along with you, that there may be kindled within him some of this enthusiasm, and that he may learn more of the work that is being done by the profession.' I tell you if we are to get good ourselves, and if we are to make these conventions a success, we must get out of ourselves, stop thinking of ourselves only, and reach out to help others. Reach out to our brother in the profession, bring him with us, that he may learn to advance step by step. I tell you if we are going to come to these conventions year after year and see the same faces we are not going to get the good that we should. We need new blood, new life introduced into the Association, and we cannot better do it than to begin ourselves and infuse new blood into it. It was not an easy matter for me to come to this convention, and I hesitated about it quite a good deal, and talked over the matter with my wife. I wanted to go, but could not just make up my mind. Said she: 'Go ahead, you will learn something, and if you don't go you will be worrying me the whole year, now go ahead.' Educate your wife along that line, and she will be a help to you, she will help to elevate you in your work, and you will broaden out in your work. Reason with your fellow-man beneath you, bring him up to the same level as yourself, and the Association will become one of the greatest in the State, and you will be a better photographer, you will be a better man for it."

The third session opened with an address by Professor Griffith, which we pub-

lish in part on another page. It was listened to with close attention, and all present appreciated the good sense of its many useful points. A letter was read from Mr. Charles L. Griffin, of Scranton, regretting his inability to be present on account of illness in his family, and Mr. Seavy spoke of the regret of the Association that the serious illness of Mr. Robert Morrison, of Pittsburg, prevented his joining with them at the convention. Mr. Morrison had worked hard for the success of the meeting, and his absence was keenly regretted by the conventioners.

At the fourth session Mr. J. B. Schriever, the President, was presented with two large brass candlesticks on behalf of the Association, as a token of the esteem in which its members hold him, and he feelingly responded, giving credit to the work of Mr. Rosser and Mr. Morrison in behalf of the convention.

Professor Griffith then brought thirty pictures from the exhibition and criticised them before the meeting to the evident enjoyment of all present. Messrs. C. O. Towles and John Betz, Jr., representing the photographers of Maryland, made a strong plea for the admission of Maryland photographers into the Association. The location for the convention of 1901 was then determined, and the city of Reading chosen by popular vote. Mr. David Rosser, the secretary, read the list of awards, as follows:

Grand Prize (bronze vase). W. E. Buehler, Philadelphia.

Grand Genre Prize (gold medal). Alfred Holden, Philadelphia; silver medal, E. W. Brown, Beaver Falls; bronze medal, Burgraff, Johnstown.

Special Class (photographers outside of Pennsylvania.) Gold medal, J. E. Griffin, Wheeling, W. Va.; silver medal, W. Schrieber, West Bend, Wis.; bronze medal, C. O. Towles, Cumberland, Md.

Miniature Class (gold medal). Hallam, Hazleton, Pa.; salon honors, Mr. Schalderbrand, Pittsburg.

Class A: Gold medal, W. E. Buehler, Philadelphia; silver medal, J. M. Kemp, Scranton; bronze medal, Alfred Holden, Philadelphia.

Class B: Gold medal, Mr. Dexter, McKeesport; silver medal, Charles Kough, Greensburg; bronze medal, Ginter & Cook, Lewisburg.

Class C: Gold medal, W. E. Buehler, Philadelphia; silver medal, W. B. Foster, Carbondale; bronze medal, R. L. Durham, Latrobe.

Class D: Silver medal, W. E. Buehler, Philadelphia; bronze medal, J. M. Rosser, Pittsburg; bronze medals: Mr. Kottman, Altoona; Mr. Reynolds, Greensburg; Mr. W. W. Bair, Emporium; Mr. Lallen, Washington.

The highest awards for salon honors were given to David Rosser, Pittsburg; Charles Kough, of Greensburg; Mr. Dexter, of McKeesport; Alfred Holden, of Philadelphia; Miss Patton, of Pittsburg; J. E. Griffin, Wheeling, W. Va.; Smith & Perry, Rochester, N. Y.; Mr. Towles, Cumberland, Md. Salon honors were also awarded to the following amateurs: James B. McClay, C. B. Aylesworth, F. E. Gaither, and Messrs. Aschman and Reno, all of Pittsburg, Pa.

The convention then passed the usual vote of thanks to all who had helped in its success, and adjourned to meet at Reading in 1901. Mr. Rosser, the President-elect, has our thanks for sending the report from which this abstract is taken.

PAPERS FOR PROFESSIONAL PHOTOGRAPHERS.

BY JOHN A. TENNANT.

LIII. PROOFS AND SELF-RESPECT.

THE way is clear this month to return to our frank discussion of weak spots in the professional photographer and his work. I propose to take up the much-neglected detail of "proofs"—a sore spot as well as a weak spot in most photographic establishments.

The old-established custom of submitting "proofs" to the patron had formerly but one purpose—to secure his approval of the result of the sitting before completing the order, almost invariably obtained at the time of sitting. Nowadays business is done in a different way, and it is high time the photographer revised his "proof"

system to fit modern business methods. Anything more completely detrimental to his interests than the old style system of submitting proofs could hardly be devised by anyone outside a lunatic asylum. The proof, properly speaking, should either "pull" the order or increase it. What is the old way? To send out, within a week of the sitting, from four to ten unretouched, untoned, and unmounted prints from the negatives made of the patron, accompanying them with a price list and sundry prohibitions and warnings against retaining proofs, resittings, and the like. I need not remind my readers how unattractive unretouched portraits are, or how very different they appear from the tastefully finished print. And yet this absurd old system persists in 80 per cent. of our studios. These business-destroying proofs reach the sitter at the height of his or her expectancy; they cause general dissatisfaction and disappointment at the very outset of the transaction between the photographer and his patron; and the good-natured public smiles at the ten commandments or more enclosed with the singularly unprepossessing prints submitted for its approval. Necessarily a minimum order only can usually result from methods of this sort.

Why not try a new way of submitting proofs—a way more in harmony with the times? Exercise your self-respect, and show your patron that you have a reasonable estimate of his or her intelligence. Take as many negatives as you desire, after ascertaining whatever wishes the patron may have in the matter of position, etc., and make an invariable rule of showing not more than two or three proofs, of which one is always the one with which you are best pleased. Let these proofs be properly finished, retouched, printed, and mounted as best befits the subject (or the order), and submit them to the patron without restriction, or apology, or prohibition of any kind. Attach to each print thus sent out a few words, stating that the portrait is complete and finished, and that if approved it counts as one of the number ordered. Fix your price at so much per single print—*i. e.*, the print submitted—per half-dozen copies, and per dozen. The price per single copy should, of course, cover the cost of the negative, sitting, and print. Thus the prices might be stated as:

Single print (if retained) . . .	$1.50
Six prints	3.50
Twelve prints	6.00

The first print from each different negative is charged as a "single print," presuming the standard work of the studio to be listed at $6.00 per dozen. The first prints submitted as proofs should be numbered and properly entered when sent out, so that customers may order by number, instead of being obliged to return the print preferred. The system here outlined may be modified according to the varying circumstances of almost any gallery above the cheapest grade; but the one thing to be insisted upon is that the customer shall see no unfinished work.

The advantages of this method far outweigh any temporary disadvantages which may result on its first introduction. The finished first prints from the selected negatives to be submitted should be expedited and sent out within two clear days after the sitting. Thus the patron sees a finished print before the excitement of the event has subsided, and the promptness, as well as the tasteful appearance of the portrait at first sight, conveys a feeling of satisfaction and pleasure. Each print should be enclosed in an envelope or folder, on which the price-list, already given, should be printed beneath the words: "This is not a rough proof, but a finished print, to be returned if unsatisfactory. Prints retained are charged for as follows:" When this method is intelligently carried out, and especially where the photographer gives a little personal thought to the preparation of the print which represents his own personal choice from the negatives made at the sitting, it will be found to work much more smoothly and more profitably than the old system. When the patron is unknown and no deposit has been made at the time of sitting, these first prints should, of course, be called for at the studio. In such cases the reception-room attendant will be enabled to secure a larger order from the finished print than is usually obtainable from a rough proof, which always causes a feeling of revulsion and disappointment. The opportunity this method affords for displaying new or more expensive styles in prints or mounts, applied

attractively to the portrait of direct interest to the patron, is obvious. It also conveys to the patron a very distinct impression that the photographer has confidence in his work, and respects it so far as to take pains to show it to advantage. For the better grades of work it would be advantageous to abandon the dozen idea and fix a better price for the single print (say $3.50), with duplicate prints at $2 each. The persuasiveness of this latter detail has not yet been grasped by the profession as well as it deserves. If you put before the average man or woman a thoroughly good portrait they will, in the majority of instances, be unable to resist the temptation to buy the print, even at a comparatively high price. Afterward the duplicate business will take care of itself, and, according to those who have adopted this plan, the demand for duplicates exceeds all expectations.

What should be done with the prints returned as unsatisfactory? Well, if the photographer refrains from sending out any portrait at all likely to be unsatisfactory, he will have few returned prints to bother about. The few he does get will keep up his necessary supply of specimens for display, and the carefulness about poor work which the system will oblige him to cultivate will keep the number of returns if anything less than the number of prints required to maintain an attractive and always fresh display, which is an absolute essential to success in business. Send out no more unfinished portraits.

ENLARGEMENTS FROM SMALL NEGATIVES.

"AMATEUR developing and printing a specialty," such is the legend which constantly appears on the note-heads of many of our friends. Whether the photographer loves the amateur or no he has had the business acumen to see that the amateur is anxious to spend money with those who will assist him. If the photographer had not stepped in he would not have scotched the amateur, but would have raised up someone else to do the work. Therefore, like a wise man he took the chance himself.

In the cities, where the amateur trade is a specialty, the storekeepers are ever on the alert for some new line of profit, and this season they are working enlargements as a novelty, 10 x 12 bromide enlargements, made from clear cut, snappy pocket kodak negatives, look very effective, and they should pay well at the price asked—75 cents.

Where the photographer finds a plate which is correctly exposed (and amateurs have the wildest notions about this), he has the possibilities of successful enlargement, for the negative should be specially made to this end, fetching out all the detail and sharpness possible, with lots of snap. It is advisable to make a negative specially with a view to enlargement where a straight order for such a print is given, but where it is a matter of using an amateur's products the photographer must e'en do his best. What is the limit of enlargement? Some excellent enlargements have been made up to fifteen or twenty diameters. This would make from a 4 x 5 negative a print five feet broad. This is scarcely a likely case, but very considerable enlargement may often be accomplished. A little practice, by inspecting the negative, and also by inspecting the enlarged image, thrown on a screen, will enable the photographer to judge how far he may go. It is supposed that if a considerable enlargement is made some adequate recompense is received. We are no advocates of extortionate prices, but we *do* believe in a man getting a reasonable return not only for his time, but also for his skill and knowledge. In making an enlargement it is well first to make a trial one on a strip of paper to judge the length of exposure required. The exposing and developing of these prints has been described by A. Scoti, in the *British Journal of Photography*. He says: In placing the sensitive paper in position for exposure, a tin hood is used on the lens, in which is fitted a fairly deep canary glass, and if this is of the right tint a reasonable time may be occupied in fixing up the paper and seeing that the image occupies the right position upon it without causing any deterioration or fog; but it is, of course, wise to accomplish this part of the operation with as little delay as possible. A couple of minutes or so will do no harm with fairly dense images; but, if exceptionally thin

negatives are being enlarged, it is prudent to insert a second sheet of yellow glass in the tin hood. Fog, however, seldom gives any trouble in enlarging when reasonable precautions are taken.

Any dodging or correcting during exposure is performed by wafting a card at a fair distance in front of the sensitive paper, and, if vignettes are required, the vignetter is placed on an upright support a short distance in front of the lens, and moved backward and forward until the shading is seen to be as desired.

A very handy little contrivance for holding a vignetter in position between the lens and sensitive paper when enlarging is formed by using the upright rod of a microscope lamp, and sliding the cut-out, to which the tins have been applied, up and down, until it just reaches the right position. Some workers seem to shirk the vignetting of pictures in enlarging, and prefer to produce them in what is known as "solid" form, but the vignetting is quite easily performed if such a simple method of holding the vignetter as stated is resorted to, and in portraiture it is often a distinct improvement.

If the enlargement is very large, a new worker is apt to feel some little anxiety when it comes to development; but there is one thing fairly certain: when he has made a few successful prints he will be an enthusiast. Once he masters it there will be no difficulty. The main factors to be observed in development are the following: First have plenty of developer ready, and see that quite a plentiful supply of safe light is provided, so as to throw a sufficiency of light over the entire developing dish, and then have at least two good-sized tubs placed in position at the corner of the dish where it has been decided to pour off the washing water.

Have the developing dish made of tightly jointed wood, of whatever large size may be required—we are speaking now of prints up to life-size—and place in it slow cold water to the depth of an inch. The exposed roll is then taken to one end of the dish, and the operator handing over one end of it to his assistant, at the other side of the dish, while he holds the other at his opposite side, the roll is equally unrolled and the paper submerged in the water *slowly*, care being observed that no air bells get underneath. By *slowly* and deliberately unrolling the paper equally at both sides this will be avoided. When the entire length is submerged (of course sensitive side upward), plenty of time must be given for the paper to become equally saturated throughout. This is important, for, if care be not observed at this stage, there will be a strong liability of causing marks, by unequal development, during the next stage of the operation. In any case it is a *sine qua non* that the entire sheet of paper must lie absolutely flat in the bottom of the dish. When the washing-water is all run off after soaking, and prior to the application of the developer, four or five minutes may be necessary before the paper is equally saturated and expanded; then, by gently lifting the dish, the water is made to overflow into the tub that has been provided at one corner, and the whole dish is reared up on end for nearly ten minutes to drain off as much superfluous water as possible so as to ensure equal development.

If metol be employed the plain solution is first applied copiously, and by rocking the dish and the use of a very wide camel's-hair brush it is made certain that every part of the surface has received the developer. This is then carefully poured back into the large wash-basin, into which a small quantity of accelerator has been placed, and, when carefully mixed, the entire wash-basinful is deftly applied to the print, and the dish rocked and the solution guided over the entire surface by means of the brush. If the exposure has been right the shadows or dark portions will come into view in about half a minute's time, and then the entire picture develops beautifully out, any parts that hang back being coaxed up with the brush, and, if necessary, a little extra soda or potash being applied, or it may be that bromide is needed.

If all goes well, the result is something that an operator may well feel proud of, and he is sure to give vent to his feelings by such expressions as "he's a beauty." When the developer is run off, the print is rapidly sluiced with water, to be followed with the fixing solution, all of which, in plentiful supplies, must be ready at hand, and no carelessness, even at this stage, must be allowed to intervene, for it must be seen that every portion is quite fixed. The washing is then finally performed, and the print drained and hung up on the

sides of the dish when reared on end, for say twelve hours, till quite dry.

The mounting of these large prints is, of course, done upon cloth. Suitable cotton sheeting can be had from any large drapery establishment, and this is first soaked, and wrung out, in clean cold water, and nailed upon a stretcher until practically drum-tight. The dry enlargement is then placed face downward, and, by means of a wet mop or sponge, a plentiful supply of water is applied to the back thereof, and, when the print is quite wetted equally throughout, a good supply of stiff and cold freshly-made paste is evenly spread over its back, care being taken that the paste is quite free from any lumps by having pressed the same through a bag of coarse muslin. The print is then placed upon the stretcher and rubbed into contact, and set away to dry. When all has gone well it will dry up beautifully smooth and drum-tight.

We said that this special work should be sufficiently well paid; the working-up is an item which cannot be overlooked. It will require both patience and experience, but with the use of a little judgment and brains a very satisfactory result will often be obtained with two or three hours' work. If metol has been used in the development, a little ivory black and Chinese white, mixed so as to yield the color of the different densities it is desired to work up, will yield any depth, from the darkest shadow to the very verge of the high lights, and the picture should be placed under the light of the window in the same position as it is intended to occupy finally.

Any black spots or eyesores that may have to be removed are gotten rid of by touching them carefully with a finely pointed brush carrying a little solution of ferridcyanide of potassium and hypo, and when they are white and dry they are easily colored to the tint of their surroundings.

After a little practice, anyone that at all cares for this class of work will begin to get quite fond of such, and will find himself imperceptibly leaning toward placing any amount of work on such pictures, and feeling quite sorry when he has no more difficulties to overcome.

EDITOR'S TABLE.

OUR readers will doubtless be interested to learn that Messrs. E. & H. T. ANTHONY, after being located over thirty years on Broadway, have removed to larger and more elegant quarters in the Mercantile Building, 122–124 Fifth Avenue, New York, between 17th and 18th Streets. This removal, which is happily timed to meet the uptown tendency of business in the metropolis, has given Messrs. ANTHONY an opportunity to display to advantage their vast stock of amateur and professional photographic supplies. A visit to the new quarters will give those who can make it a photographic treat which is not easily describable in type, and we advise photographers who may be visiting New York to spend an hour or two in looking over the remarkable collection of photographic conveniences shown by Messrs. ANTHONY & CO.

The premises occupy the whole of the second floor of the building with large wings facing out upon West 17th and 18th Streets. At the front, as one enters from the elevator, are the offices of the firm; nearby is the city retail department, which is very beautifully appointed for the convenience of visitors and customers. At the centre Mr. SCANDLIN, the editor of the *Bulletin*, and his clerical staff are grouped around a great library of photographic books; and here also are the desks of the many travelling representatives of the firm. Behind these, in huge blocks of shelving, is the stock from which retail and shipping orders are drawn; and in the 18th Street wing is a large fireproof suite of rooms, wherein are stored chemicals and other inflammable material, the laboratory and compounding rooms.

The general appearance of the place, with its little army of workers, gives one a better idea of the great business which the firm of E. & H. T. ANTHONY & CO. has built up in these last sixty years than was possible at the old establishment. It is, we believe, the largest establishment of its kind in the world, and we congratulate Messrs. ANTHONY & CO. upon its successful growth.

THE LOVELL DRY PLATE MANUFACTURING CO., New Rochelle, N. Y., announce a new orthochromatic plate, to be known as the Lovell Color Differentiating Plate. We hope to report upon its performance at an early date. We also hear that this company is introducing Backed Plates, orthochromatic and ordinary, for non-halation effects, interiors, and the like.

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JULY, 1900.

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DEVOTED TO PHOTOGRAPHY, MONTHLY: ILLUSTRATED.

AMERICAN PHOTOGRAPHY 289
TAKING CARE OF LENSES 291
THE CULT OF THE GODLINGS 292
ENLARGING BY SUNLIGHT AND BY THE ELECTRIC LIGHT. By Sir Wm. Abney 299
THE CONVENTION AND PROSPERITY 302
STUDIO TRADITIONS OUT OF DOORS 305
RETOUCHING. By E. Allers 309
COPYRIGHT IN ENGLAND 311
ABOUT METHOD 312
NICHOLSON'S NEW TRIMMER 314
RAPID WHOLESALE DEVELOPMENT. By W. D. Welford 315
THE NATIONAL CONVENTION PROGRAMME 319
PLATES vs. FILMS. By A. T. Newton 320
GENRE. By George Clarkson 322
PLATINOTYPE PAPER 323
LETTERS TO JACK—THINGS OLD AND NEW 325
TELEPHOTOGRAPHY. By Rev. Frank S. Dobbins 326
LOCAL REDUCTION 328
RAILROAD RATES FOR THE CONVENTION 329
THE WASHING OF PRINTS 331
CLOUDS. By Robert Melville 332
PHOTOGRAPHY IN WARM CLIMATES 333

OUR PICTURES:

Portrait. Negative by Hollinger, New York. Print on Special Rough Velox.
Portraits from Platinotypes by Hollinger, N. Y., P. S. Ryder, Syracuse, N. Y., and F. W. Rice, Worcester, Mass.

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A PORTRAIT BY HOLLINGER

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WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

VOL. XXXVII. JULY, 1900. No. 523.

AMERICAN PHOTOGRAPHY.

SOMETIMES patience ceases to be a virtue, and must give place to the whip of plain speaking. It has become the fashion of late, more particularly with a noisy section of the English photographic press and a few ambitious youngsters on this side of the Atlantic, to decry all American photography, save that produced by a certain "school," as something almost beneath contempt. In season and out of season we are confronted with windy critiques from which we learn that, with the exception mentioned, photography in America is in a truly deplorable condition. According to these amusingly ponderous utterances, which abound with verdant freshness and advice of a very lofty kind, our amateur photography is childish and crude in the extreme; our professional portraiture hopelessly bad and beyond redemption; our photographic journals are blind leaders of the blind, given to "hifalutin," and generally despicable. Difficult, indeed, would it be to say in what the fashionable critic of to-day differs from the Pharisee of old!

At first the output of these self-anointed critics was regarded as adding to the gaiety of nations as so much "light reading," to be smiled over rather than seriously considered. The superior "tone" and mystic subtleties of Hartmann's papers, for instance, tickled the sense of humor in the American reader. The long drawn condescension and soulful earnestness of Hinton's contributions, as another instance, provoked that delightful bewilderment which the American enjoys when puzzling out a genuine British joke as we find it in *Punch*. The sugar-coated pills of pure Art, given out quarterly in a certain club organ, so "doped" the subscribers thereof that back numbers of the papers sold at a premium, and the price was doubled that the pills might be made stronger. The reverberations of Keiley's "pom-pom" brought forth a salon even out of Chicago, made *The Photo-American* shriek in sarcastic comedy, and awoke the gentle Cummings from his peaceful slumbers under the shadow of Plymouth Rock. All of which is duly attested in various precious documents, organs and whatnot published here and abroad. But the fashion has been overdone, and latterly its narrowness of view, its self-assurance and fatal lack of common-sense have given it a nauseous flavor, and it deserves condemnation as a public nuisance. On another page, therefore, we give place to a well-informed contributor who takes a few of the "godlings" to task for their bumptiousness. His treatment of them, although severe, is well merited by the absurdities they have perpetrated in the fair name of criticism.

As for American photography, it needs neither apology nor justification at our hands. It is appreciated at home by a public quite as intelligent as that to which the European photographer appeals. Whenever exhibited abroad, as at London, Paris, Berlin, Vienna, etc., it has secured more than a proportionate share of praise and reward. In common with the photography of England and other countries, it has its weak points as well as its points of excellence. But, if we compare it at its best, or by its average, with the best or average foreign work, the fact is plainly evident that the American photographer, amateur or professional, has no cause to be ashamed. And this may be said, with equal truth, of his achievements in the past as well as of his promise for to-morrow.

THE LAST CALL TO THE CONVENTION.

I WANT this last call to rouse every photographer in this country. I want every one of you to realize the importance *to you* of being in evidence at the coming convention. That convention meets in Milwaukee on July 23d, and will, it is already assured, be the most important and the most interesting meeting we have ever held. Now, what are you going to do? We want you to meet, and be met by, the best and most representative men in our profession. We want you to see their latest and best work, and to let them see yours. We are aiming to broaden the horizon of every one of us by contact with the best wits, the cleverest ideas, and the newest methods that the most up-to-date developments of the photographic art can offer. Are you with us?

I am hoping that you will not only send an exhibit, but be here yourself. We have a splendid building for exhibition purposes, a lovely city, and a firm intention of giving you the best time, both socially and professionally, that you have ever had in your life.

Yours fraternally,
S. L. STEIN,
Pres. P. A. of A.

RAILROAD RATES.

The railroads have granted a rate of fare and one-third for the round trip on certificate plan.

Certificates will be honored which show the purchase of going ticket not earlier than three days prior to the date announced as the opening date of the meeting, and during the first three days thereof, and if presented for return tickets not later than three days after the date announced as the closing date of the meeting (Sunday not to be accounted as a day in any case).

Be sure that when purchasing your going ticket you request a certificate. Do not make the mistake of asking for a receipt. Present yourself at the railroad station for ticket and certificate at least thirty minutes before departure of train.

Certificates are not kept at all stations. If you inquire at your station you will find out whether certificates and through tickets can be obtained to place of meeting. If not, agent will inform you at what station they can be obtained. You can purchase a local ticket thence, and there take up a certificate and through ticket on your arrival at the meeting. Present your certificate to Frank R. Barrows, treasurer of the P. A. of A.

It has been arranged that a special agent of the Passenger Associations will be in attendance to validate certificates on the 25th and 26th. You are advised of this, because if you arrive at the meeting and leave for home again prior to the special agent's arrival, you cannot have the benefit of the reduction. Similarly, if you arrive at the meeting after the special agent has left, you cannot have your certificate validated.

MILWAUKEE HOTELS.

Hotel Pfister, $3.00 to $5.00 per day, American plan, rooms with baths $4.00 to $5.00 per day, same plan. Rooms on the European plan from $1.50 to $3.50 per day, with bath $2.50 to $3.50. This hotel has been chosen the headquarters for the Executive Committee.

Plankinton House, $2.50 per day and upward, American plan, without bath, and from $3.50 per day and upward, rooms with bath; European plan $1.00 per day and upward without bath, and $2.00 per day and upward, rooms with bath.

Republican House, $2.00 to $3.00 per day double, American plan.

St. Charles Hotel, $2.00 to $2.50 per day, American plan, with bath $3.00 per day.

Kirby House, $2.00 per day, American plan; $2.50 per day with bath, American plan.

Hotel Blatz, rooms single, $1.00 per day and up; rooms double, $1.50 per day and up; rooms single with bath, $2.00 per day and up; rooms double with bath, $3.00 per day and up. European plan only.

Hotel Davidson, $1.50 per day; $1.00 per day where two and three occupy one room, European plan only.

Schlitz Hotel, $1.00 per day; 75 cents per day where two occupy the same room. European plan only.

By addressing the undersigned, quoting price of room desired, and whether on American or European plan, also what hotel is preferred, on receipt of which the room will be engaged, and notice to that effect given.

S. L. STEIN,
126 Wisconsin Street,
Milwaukee, Wis.

It is unnecessary for us to add anything to President Stein's "Last Call." We have advocated attendance at the conventions of the craft with all the energy we possess since 1865, when the old N. P. A. was organized. The many benefits obtained from the gatherings of the Association are obvious to anyone of intelligence. The photographer who fails to secure his share of these advantages can hardly expect to win the measure of success in business which naturally comes to those who keep abreast of the movements of our time.

The coming convention marks the twentieth anniversary of the Photographers' Association of America. It is in the hands of a body of officers who represent the progress and prosperity of the craft. It is to be held in one of the most beautiful, as well as one of the most interesting, of our Western cities—Milwaukee. That it will be a remarkable gathering of the craft goes without the saying. We hope to greet all our readers, without exception, at the Industrial Exposition Building, Milwaukee, on the morning of July 23d, and assure them, beforehand, of the most enjoyable and profitable holiday of a lifetime.

TAKING CARE OF LENSES.

THERE is a good deal of misconception as to the best way of taking care of a lens; indeed, many photographers seem to consider that a lens needs no special care at all. When it is remembered that we often handle cameras in which four-fifths of the cost is in the lens it will be seen that the lens is, after all, worth thinking about. We get our notions about lenses from what we see of glass. We are used to window cleaning, and to drinking from glasses, and so we get a disregard for glass in general, and a comforting belief that unless it is broken glass it is all right. Some optical glass is much softer than ordinary window glass, which is made specially with a view to hardness. The glass of a lens is softer than much of the dust that settles on it. The dust is fine grit, some of it hard sand which is quite able to cut tiny scratches into the glass.

Fortunately a lens is very easily cared for. All lenses should have some safe wrapper. This may either be a lined case, specially made to fit them, or it may be a little bag of wash leather. I always use a simple bag like a coin bag, with a running tape to draw the mouth tight, but a very serviceable one may be made rather more elaborately. Cut two disks of cardboard just a trifle bigger than your lens mount, and cover these with wash leather. These make the ends of your case. Suppose the barrel of your lens is four inches. Cut a strip of wash leather about four and one half inches broad and long enough to rather more than go round the lens. Sew this strip by the edge to each of the cardboard disks. Sew firmly just half way round the disks, and you have a little box or pocket into which the lens can be dropped. The rest of the strip folds over the lens, forming a cover to the box, and it can be tied by a piece of tape.

It may be that the cement between the elements of the lens (that is, between the different glasses) has got started. If so, I would say send it to your lens man to be fixed. But many do their own fixing, and this is the way: Remove the mount by unscrewing until you have nothing but the glass. Heat this *very* gently, and when it is quite hot the cement will melt and the glasses can be separated. After they have been cleaned and dried, warm again, and when quite warm put a drop of Canada balsam onto the concave lens. Press the other firmly in contact and when cool the lens is ready for remounting. Remember to use care. Be sure you know exactly how your lens fits together. Don't get the parts turned round, and don't try to mount it the wrong way. To clean the glass use an old handkerchief of fine linen, clean and soft. It may be

that it is necessary to wash the glass. If so use good soapsuds—preferably from Pears soap. Dry with a soft cloth and then rinse in clean cold water, and again dry carefully with a well-washed, clean cotton or linen cloth.

Dr. A. Miethe recently gave some useful lens information. For properly cleaning optical glass, it is very important that the material used should be free from dust and possessed of other needed qualities, first of which should be the capacity for removing grease. Wash leather, which is sometimes recommended for this purpose, is not adapted to the removal of grease, sometimes even depositing it. In Dr. Miethe's opinion, well-washed cotton cloths are by far the best suited to the purpose, linen especially having the property of removing dirt and grease without scratching. It is, however, in all cases difficult to clean close up to the mount with any such material as above, and for this purpose pith, which is obtained from rushes, elder trees, and sunflowers, is especially well adapted. Short lengths of this pith may easily be obtained, which may be pointed if necessary to reach the smaller crevices. Chalk and rouge are both condemned, as are also alkaline solutions, such as ammonia, caustic soda, caustic potash, and soda or potash, as in the case of the latter they are apt to attack the glass, and repeated use will destroy its surface entirely. The fluids recommended for this purpose by Dr. Miethe are rectified turpentine, absolute alcohol, and ether. He advises that the surface should be moistened with the turpentine, rubbed dry with a linen rag, and then polished with ether. Inasmuch, however, as Canada balsam with which the lenses are cemented is dissolved in turpentine, care must be taken to keep an excess of the fluid from the edges of the lenses.

THE CULT OF THE GODLINGS.

MANY interesting discussions have recently taken place concerning the relative merits of what are spoken of as the "old" and the "new" schools of photography. The question has almost, for the moment, overshadowed that somewhat threadbare one, "the professional *versus* the amateur." It may, in turn, yield precedence, for a little while, to the Cult of the Godlings. It certainly will not fail to do so through any neglect of effort on the part of the godlings themselves.

Within the past few years several persons possessed of artistic temperament, and with the technical training of artists, have chosen photography as a means of expression. They have not, usually, depended upon the camera for a livelihood; and they have not graduated through the studio of the professional photographer. Freedom from the conventions of orthodoxy and from the whims and wishes of "the sitter" has enabled these workers to develop along new lines. The result has been the moulding of a number of useful individualities; and the accession of a number of these workers—including several women—to the professional ranks may exercise a broadening influence on the craft as a whole.

Within the past few years, too, the amateur has increased in the land, and among the many there are many good workers. They wisely keep aloof from portraiture as commonly understood, and work along lines of their own. There are many who do good work, a few who do very good work, and the fact has not been overlooked by the American in general, in whom a generous appreciation is a characteristic trait. Perhaps it is this appreciation, given with a simple wish to please, which has led to the formation of a select "inner circle," a circle which claims, in effect, that it contains within itself all that is commendable in American photography.

As with all cults, these godlings have their advertisers, and these are, curiously enough, led by an Englishman. The godlings who are most closely associated with the publicity department of their cult, and of themselves—mostly of themselves—are, in England, A. Horsley Hinton, and in America, Joseph T. Keiley, and a person named Hartmann.

There is in New York a body of men styling themselves the Camera Club, and within this body the godlings reign. In a measure, aloof alike from their brethren

and the outlanders, the godlings have undertaken the regeneration of the country and the exploiting of themselves.

Neither the country nor their fellow club-members are exactly clamorous for regeneration, but this does not check the good work. To assure themselves of a constituency the godlings have annexed several of the strong workers referred to as having recently entered the ranks of photography. These workers have not been consulted as to their adoption; it is a case of "benevolent assimilation."

The person Hartmann teaches through a series of dissections of the work of the adopted ones, with portrait of the author. To judge from his writings he has no acquaintance with the practical side of photography, as he certainly has none with either its breadth or its history. He is said to be a very able "art critic," and true it is that at first glance his writings would, if it were possible, deceive the very unelect. With a wide range of adjectives and much disregard to punctuation (points in which he hopelessly outdistances even so careless a journalist as myself) he fashions sentences which the reader is apt to accept on sight. A more careful reading reveals that his mission is dissection, sometimes critical, sometimes cold-blooded; and that when he does not dissect he is commonplace.

I may here point out that the godlings suffer from an inability to discriminate between the temperament of the artist and the eccentricity of the crank. They have, too, an erroneous conception of the requirements of the critic.

The critic must be a man of wide sympathies and wider knowledge; not the narrow mouthpiece of a cult.

It may be urged that I am speaking almost too strongly for journalistic courtesy, but those who have read the somewhat arrogant writings of the cult will recognize that I am but following them a little distance on their road. Hartmann is scarcely worth more serious consideration, and we will turn to Messrs. Horsley Hinton and Joseph T. Keiley. Horsley Hinton is a maker of good pictorial photographs; so good is his work that it is difficult to associate Hinton the photographer with Hinton the godling writer. He has, at times, shown himself to be a worthy successor to H. P. Robinson at his best—which is high praise for a photographer. Keiley has a graceful and facile pen, and with matured powers and a broader grasp of his subject he might in part fill the place left vacant by Gleeson White. It is always a delicate task (for anyone but a self-constituted critic) to judge work which the author announces as intended for "the few." Keiley might be termed an interesting and clever experimenter, and his work at times suggests a transition stage which should be cultivated in retirement. Hinton and Keiley might together make a team. If the former would abandon his pen for all time, and the latter go slowly with pen and camera until assured of his pictorial standing, the photographic world might be helped.

There is a period in the life of every well-regulated boy when he first experiences the delight of long trousers and anticipations of a moustache. At such a stage of existence sisters are an unfortunate possession, and the old school-house is suddenly discovered to be the resort of undersized and altogether despicable juveniles. This attitude of youthful superiority is the one taken by the godlings.

A correct estimate of Keiley's writings may be obtained from the pages of *Camera Notes* and from his contribution, "The American School," to *Photograms of the Year 1899*. In this latter effort we learn the position of the elect.

Since the beginning there have been good workers—respectable practitioners they might be termed—in the ranks of photography. One by one, school by school, they have budded and blossomed and faded. Their influence has been nil and their names are forgotten, because they lacked utterance. The result has been stagnation of all things until the godlings arose and with a great shout sent a thrill of life throughout the land.

Their principal means of publicity is *Camera Notes*, a sumptuous and expensively illustrated quarterly magazine, described by Keiley as "the most unique photographic magazine in the world." Among the many modest achievements of this "most unique" quarterly it "has raised the standard of photographic excellence in both amateur and professional circles far above any previously established; has educated the public taste to an understanding of what really good work

is, and has created an art movement in the photographic world that gives every indication of maturing into a distinctly American school." The magazine "is so much in demand that almost immediately it appears the copies sell at a most extraordinary premium, and the most advanced of the leaders of the new movement have come to be termed disciples of *Camera Notes*."

These quotations are from the pen of Mr. Keiley, and he announces further an issue of some of the illustrations of *Camera Notes* in separate form: "A portfolio containing eighteen exquisite photogravure reproductions of the masterpieces of some of America's foremost workers. This portfolio is the most perfect thing of its kind ever published."

Of course, all this glorious achievement has not been without cost.

"There is opposition—bitter, aggressive opposition. . . . But slowly, irresistibly, almost imperceptibly, the forces of ignorance, provincialism and prejudice have been crushed to the dust and no longer bar the advance of progress."

An examination of the pages of *Camera Notes* shows it to be under the editorial control of Alfred Stieglitz, with Joseph T. Keiley as assistant in chief. The inference, therefore, is that the "most advanced workers of the new school" are disciples of Stieglitz and Keiley. This inference is confirmed by the fact that *Camera Notes* is largely used for the personal glorification of these two gentlemen. This glorification is carried to absurd lengths, for when either of these writers enters into eulogy of the cult, a note signed by "The Editors" is appended, pointing out that only the modesty of the writer has excluded his own name from share in the adulation. Thus does modesty meet its reward in receiving the greater glory. I did not include Mr. Stieglitz among the godlings. He is saved this distinction by the undoubted excellence of his photographic work. Everyone who knows his versatility, his strength, and his sound technique, regrets that so able a worker should have fallen under godling influences; and this regret is greater with those personally acquainted with his real courteous modesty, so much at variance with the phase which he permits to be revealed in print.

Not content with leading the American photographer from darkness to light, the godlings have further endowed him with a new method of faking which will revolutionize all things. This new power, which is commonly spoken of as "the glycerine method," marks an epoch in photography greater than its first discovery, and infinitely greater than the entry of such innovations as the dry plate or platinum paper. The glycerine method is, in its outline, simplicity itself, and of a robust age. A platinotype is printed, and before development it is coated with glycerine. The developer is applied locally, usually by means of a brush, and this method allows of much local control, amounting to entire blocking out, if required. The process may be carried a step further and different parts of the same print developed with different developers. This gives possibilities of various tones, and is used mostly to impart a "flesh tint" in places, a thing which was not possible hitherto except by use of paint (and a wash of water color on a photograph is altogether illegitimate and not to be mentioned in godling circles).

Perhaps the godlings are wise in endeavoring to lastingly link their names with the perpetual fame of the glycerine method. Cannot they read the lessons of the past? Who first applied the practice of vignetting to photography? No one surely knows, and yet some one was the first to see, with the sure eye of genius, that simple method by which countless thousands of photographs have been rendered "artistic" In future years, when comparative merits can be more accurately gauged, the beginnings of photography may be traced to the closing years of the nineteenth century, and statues raised to those who so thoughtfully placed themselves on record as the true and only godlings.

A. Horsley Hinton has several times contributed godling utterances to American journalism, and he has recently hashed his teachings into a contribution to the catalogue just issued by Andrew J. Lloyd & Co., of Boston. Writing on "The Renaissance of Artistic Photography in America," Hinton is not content to be a godling, but aspires to the position of a little god. Those who are

interested cannot do better than obtain this catalogue, and read the article. I think that none who do so will consider me unduly discourteous in my somewhat frank consideration of an artist and an editor.

Hinton is, as I will show, somewhat inapt as a writer, but a careful reading of him will reveal what he is endeavoring to say.

We all know, to our sorrow, that we are apt to get too much on our plates. But not one of us, even in his insanest or most artistic moments, ever imagined the thing to be as bad as it is painted by A. Horsley Hinton. Hear the declaration of the godling:

"Photography's deficiencies or shortcomings, artistically, consist of excesses; that is to say, its promiscuous inclusiveness at once makes it deficient in power of making selection and redundant in execution, or, to put it otherwise, the compulsory excessive inclusion makes necessarily a lack of power to omit."

In *The Pose in Portraiture*, John A. Tennant tells us the same thing:

"The bane of photography as a method of expression is that it tells too much, and gives equal prominence to things important and unimportant."

Mr. Hinton should take a lesson in expression from his "American contemporary."

Hinton considers it an axiom that the applications of photography to the attaining of scientific knowledge or for the giving of æsthetic pleasure "are higher and nobler than the more practical and useful applications to commerce and the useful arts, or even to its cultivation as in independent handicraft." We learn that photography has suffered from inartistic sponsors—"were not the chemist, the optician, the skilled artisan, so to speak, the godfathers of the infant photography? And these trained up the child as they supposed it should go." This unfortunate fostering led to a striving after fidelity to truth; the photographer erroneously supposed that his artist's mission was "to copy nature," and gauged his success by his closeness to the fact. After learning this through many paragraphs we reach the "art." And here we come to an understandable explanation:

"The difference between the photograph and the picture is that the former indiscriminately records everything, without selection or preference, as a final fact; the latter selects some out of the many, and emphasizes one or few out of these, in order to express an idea or sentiment and appeal to the imagination of the beholder."

As a half-truth this may be accepted as a truism. Pronounced as an axiom, with its evident inference, it is unworthy of further consideration.

Mr. Hinton refers, more in sorrow than in anger, to the fierce opposition which the godlings have incurred. Unlike those martyrs of old who went to the stake in defence of their faith, or in opposition to the faith of their enemies, the godlings have been forced to a compromise. This is perhaps to be regretted, but certain it is that the word "artistic" has been sacrificed on the altar of expediency, and "pictorial" reigns in its stead. A somewhat complex and unconvincing argument is advanced to defend and define the limits of faking, and we learn that its practice is a temptation to "exceed the limits of good sense and good taste." This is interesting, and we learn further that the means are only justified by the excellence of the result. "The notoriety which awaits on mere eccentricity is the applause which is indulgently given to the fool." Chance effects are, we are told, "the antics of a clown or the jangle of cap and bells, and the praises awarded to each one are of equal value."

From these comforting hits at godling worshippers Mr. Hinton rises to the peroration.

In three paragraphs the career of American photography is painted with much godling content.

"It has been long enough with us to acquire bad habits, like a young child; and, having progressed in the wrong way, the task of correction is proving a difficult one to those who, seeing the evil and being moved with regret at the prospect of lost possibilities, and stimulated by the

passion of the reformer, are by example and precept seeking to arrest those tendencies which prevent its attaining a nobler state."

"In America, as in England, photography's exceeding adaptability to everyday uses has, perhaps, led to its undue exaltation as an industrial craft; and the craftsmen, made vain by the praise of the undiscriminating, are content with the smug complacency of moderate success in little things. They have not the spirit to see that a position if only on the steps of the higher throne is greater glory than a seat amidst the crowd."

"Artistic or pictorial photography in America is but of a very tender age; and in no country are the possibilities of its future greater. None the less, it may very easily become crippled or deformed, led astray, or crushed out of existence, but that its guardians, if few, are sufficiently staunch and loyal to make the last contingency very improbable."

Good little godling!

Mr. Hinton falls foul of the professional worker, of the amateur, and of the journalist. He may himself be classed among the two latter, and as he once, for a brief period, entered the ranks of the former, it might reasonably be inferred that he had some little acquaintance with his subject. Here is his word on the professional:

"The men by whom photography is practised are chiefly those who pursue it with purely selfish ambition, and are interested in its advancement only in proportion to the increased aggrandizement such advance may lead to. In thousands of cases we find men who have adopted photography as a profession not from any special aptitude for it, nor from love of it, but because the mere chance of circumstances did not lead them to be shoemakers or to follow some other trade. Succeeding more through the excellence of apparatus and perfection of process than their own skill to produce likenesses of men and things, they, knowing no better, call themselves artists, adopt a sham Bohemianism of carriage, and by careful observation cultivate an unconventional exterior which is as artificial to them as it is an essential attribute of a genuinely artistic temperament."

Now, should even a godling be allowed to utter such nonsense without protest? Wrapped in his own superiority—smug complacency he terms it—he speaks on a subject of which he knows but little and understands even less. His broad contempt makes legitimate almost any mode of reply. Certain it is that a pestle and mortar treatment would prove ineffective, and the choice lies between the bludgeon and the rapier.

To leave the professional, we will turn to the amateur:

"The debasement of photography, due to its being practised by thousands of people as a mere frivolous pastime, has been brought about by the ingenious commercial enterprise."

Good little godling! We will let the amateur wriggle in company with the ingenious commercial enterprise, and pass on to the journalist:

"The reproductions of contemporary work, which are spread world-wide by the enterprising publishers of American photographic journals and magazines, are for the most part such as to make one marvel who is responsible for their publication, and what manner of men they may be.

"My American friends who are ably and devotedly laboring for the advancement of better things in photography must not be surprised if England and Europe are slow to give America credit for as much as, through them, she deserves, when for every single one of their own clever productions that ever reaches more than a few favored ones, ten thousand reproductions of the most paltry rubbish are showered around accompanied by highfalutin eulogiums from the editorial pen.

"The illustrated photographic publications of America are, with the rarest exceptions, the most serious drag and hinderance to pictorial advance."

Now, Mr. Hinton, what do you deserve?

You are a clever and widely-known photographer, and you are a godling. I am neither. But we are both journalists, and on this basis we will talk.

I will commence with a little anecdote. A few years ago, when I was in England, an American lady married a somewhat uncivilized Indian, and we all twitched our noses into promise of a sneer and said "American." Recently an English gentlewoman married an African "king," no remove from savagery. It was the culmination of what had become more or less a scandal. But the American people simply said "foolish girls." Can you apply the moral?

Mr. Hinton wonders, with true godling insolence, what manner of men publishers of American photographic journals may be. He says—with more than godling impertinence—the American journalists reproduce the most paltry rubbish, accompanied by highfalutin eulogiums.

The present writer has selected many photographs for reproduction, and he has written concerning some of these photographs. He has never selected paltry rubbish, and he has never written highfalutin eulogiums. Hinton is editor of a photographic journal. He has published half-tones which have made courteous American journalists say among themselves that probably the block did not do justice to the original. He writes highfalutin eulogiums, and he writes most paltry rubbish.

Mr. Hinton wonders what manner of men we may be. He will be interested to know that many—probably the greater number—of the "American" editors known to him are British born or English subjects.

The average American photographic editor (Britisher included) is a hard-working, conscientious journalist. He possesses some knowledge and some sense; he has a brotherly feeling for his co-workers, and he minds his own business. I have said that Mr. Hinton's remarks are not true as regards myself. I will go further. I have the honor of knowing the editors of all the recognized photographic magazines published in New York, including Dr. Wilson, who has been an editor for a third of a century; and Dr. John Nicol, who practised photography before Mr. Hinton was born. Add to these that unregenerate man, F. Dundas Todd, in Chicago, and several others who are doing honest work! Mr. Hinton's remarks are not at present true concerning any one of them.

It has grown to be a custom for some English journalists to sneer at American magazines. They will quote from or refer to "an American contemporary." When they find something which is not in the best of taste they have not the grace to keep silent. They do not even name the culprit; they name "American photographic magazines."

I am not going to draw general comparisons; sweeping accusations from this side would be as untrue as those I refute. But I am going to adopt (I trust it may be for this occasion only) a method which should be the only alternative to silence. I am going to make a specific statement and name the culprit.

Horsley Hinton is editor of an English magazine called *The Amateur Photographer*. It is published weekly, and every week there appears, in plain gothic type, on the front cover, these words: "The Largest Circulation of any Photographic Paper in the World." The question of circulation is ever an interesting one, alike to journalists and advertisers, and it is one on which I will write for a few moments. This statement of *The Amateur Photographer* can truthfully be made by only one photographic paper; made by any other it may be merely erroneous; it will probably be an audacious lie.

Circulation claims which do not receive general acceptance have been and are made by some American magazines. But I know of none making the claim put forth by *The Amateur Photographer*. There is a little magazine published in Milwaukee, and it is called *Paine's Photographic Magazine*. Its editor is not a godling, and he makes no rash claims in his magazine. In reply to a request for information he writes me that his output per issue is 10,000 copies. He offers me full assistance if I have any wish to investigate. He will even show me his books. Now, mark this. Several photographic journalists who are intelligent men and have some knowledge of the "business ends" of our magazines find no difficulty in accepting this statement as probably true. Can Mr.

Hinton find either a photographic journalist *or* an intelligent man who will find no difficulty in accepting *his* statement as possibly true. Let him try, and he will see a smile on the face of British photographic journalism. Even that anti-godling and common-sense veteran *The British Journal of Photography* would look extremely pleasant.

Now for an "American item." There are at least two photographic publications in America which claim a specific circulation, and offer to *prove* that claim. In each case the offer has been challenged and the challenge met. In each case the actual circulation has been shown to *exceed* the number claimed.

If Mr. Hinton has not the grace to remove that legend let him at least give figures of the largest circulation. This is the surest way to obtain credence, and as soon as credence is given, other papers will speak.

Suppose that all godling inspired photographic papers combined circulations, and to them was added a sheet, tiny and gratis, but useful, emanating from the East of London. Would not the tiny sheet "prove more than all the rest?"

It has been charged against American photographic journalism that it is guilty of publishing pictures which offend modesty. The charge is not true. *The Amateur Photographer* follows an inartistic custom which is seldom followed on this side. (The most known American offender is a little magazine with which I am connected). I refer to the custom of interleaving reading matter with advertisements. Among the advertisers whose announcements appear in *The Amateur Photographer* is a firm which sells "fine art photographs." This firm will send assortments for selection to responsible applicants in any part of the world; and asks no deposit. The list of subjects commences: "Paris Salon Pictures, Classical Undraped Figures, Secular and Religious." So far all is legitimate, though "exceeding dubersome." But the advertisement is emphasized by a half-tone illustration, and the illustration is usually selected from the "Classical Undraped Figures." If Hinton will turn to advertisement page viii, September 30, 1898, he will see, facing reading page 775, a typical illustration. This figure, clad in a sandal, *may* be *art*. It may even fulfil the aim of pictorial art, which is, according to Hinton, "to appeal to the imagination or merely to the senses by a certain eclecticism in its treatment of natural forms." *Does* it? And was it placed there for any such purpose? If Hinton will honestly answer either of these questions I will feel exceeding sorry for him.

There is a sweeping charge of piracy levied against all American photographic magazines. This charge is not true. Articles are copied from English to American magazines, and *vice versa*. The most widely quoted American magazines are, probably, *The Journal of the Photographic Society of Philadelphia*, *Camera Notes*, *American Journal of Photography*, and *Wilson's Photographic Magazine*. This quotation is usually a perfectly legitimate acceptance of a general editorial courtesy. There has recently been one glaring and unwarrantable trespass on this editorial courtesy. The trespasser was none other than Horsley Hinton, and the trespass was such that the culprit cannot hide behind either financial management or business expediency.

There was recently published in *Camera Notes* an article entitled "The *Camera Notes* Improved Glycerine Process for the Development of Platinum Prints." This article was written by Joseph T. Keiley, and illustrated by him and by Mr. Stieglitz. It was known that it was to be reprinted in pamphlet form and marketed. Horsley Hinton, unwarrantably presuming the acquiescence of the author, reprinted the entire article, altering merely a reference to a special brand of blotters, to the advantage of an English advertiser. More than this, he reprinted every illustration except one, and regretfully omitted that, owing to the difficulty of representing a color print in monochrome.

It is probable that Hinton has no idea that he has offended, for Mr. Stieglitz, who is the soul of courtesy, may have refrained from protest. In this he would but follow the traditions of the best American journalism.

Hinton makes sweeping and untrue statements about American journals and their editors; and he derives much godling delight from so doing. His charges are entirely unprovoked.

A journalist in America replies with specific and true statements about *The Amateur Photographer* and its editor. And his reply is warranted.

A. Horsley Hinton is a man who has produced good photographic work. As a photographer he has earned an honorable position among the leaders in the art. Nowhere has this position been more generously accorded than in America. In treating of Hinton the photographer we are treating of a strong worker.

Hinton the writer is a man who produces much specious nonsense. Where he is not ponderously involving his sentences around some trite commonplace, he is moralizing with smug godling complacency, or indulging in ignorant tirades which should shame any self-respecting man. It may be that his defects have never been hinted to him, and that until now there has been no awakening. But I fear the trouble is too deep for treatment even with the knife; and I can only hope, with all who know his work, that he will either learn facts and restraint, or forever hold his peace.

WILLIAM EDWARD WARD.

ENLARGING BY SUNLIGHT AND BY THE ELECTRIC LIGHT.

BY SIR WILLIAM ABNEY, IN "PHOTOGRAPHY."

IT is not proposed to compare the results of quarter-plate photographs enlarged up to, say, twenty-six inches in the longest side with those which would be obtained direct in a large camera. It appears to the writer that it is almost self-evident that the quarter-plate camera has one advantage at all events, in that it can be carried into positions in which it would be impossible to haul up even a 12-in. x 10-in. camera, let alone one of a larger size.

We will commence by supposing that we have got a quarter-plate negative which is fit pictorially and technically for enlargement, and here let us enter a caveat. It by no means follows that a subject which looks well on a quarter-plate will look equally well on an enlargement. A print may be well "filled up" in a quarter-plate, the size precluding any large expanse of uninteresting space being left unfilled, but an inch square of flat unfilled space when enlarged to six times its size may appear a great blot on a print. It is for this reason that a view-finder which gives a diminished size of view is not always satisfactory. It is very apt to cause a view to be taken, even when there is an uninteresting piece of subject included, because it appears to be so minute; but even in a quarter-plate this may mar the pictorial effect. A view should be chosen when seeing it of at least the same size as the negative in order to make sure that a proper choice has been made. Rough marks on the body of the camera, which indicate how much of a view will be included, answer best of all when practice has made their employment easy, since one's eye has free scope for selection, and the parts which had better be left out in an enlargement are more readily seized.

But we are supposing that the negative selected will give a good enlargement, and that we are to make one by sunlight or by the electric arc. If we send a beam of sunlight through the negative we know that only a small portion of the beam will strike the lens, and while a small part of the image cast by the enlarging lens will be brilliantly illuminated, the rest will be shadowy and lacking in brightness. With a quarter-plate negative it may be possible to use a condensing lens in the optical lantern, but there are a variety of small (and though small they are real) difficulties in getting equal illumination throughout, and there is danger of there being some one spot brighter than the rest. Again, too, if the electric light be employed there is the danger of the negative getting overheated, unless a water cell be used.

Our own plan of enlargement is a very simple one, and necessitates no large camera, for the dark-room itself is used as the camera. To begin with, a hole is cut in the dark-room wall large enough to hold the back of a half-plate camera which racks out from the back. A dark slide, preferably an old single back from which the door and the front are removed, is placed in position, and the lens, such as a half-plate lens, points into the dark-room. Light is carefully excluded from the aper-

ture, only that which eventually finds its way through the lens being permissible.

Running into the room from beneath the lens is a flat, firm table or bench, the top being some eighteen inches below the centre of the lens. On this is placed a large drawing board on firm feet, care being taken that when placed on the bench or table the plane of it is perpendicular to it. The feet are broad, and are made so that when one of them lies along the side of the bench or table the face of the board is at right angles to the axis of the lens, and, consequently, parallel to the surface of any negative which may be held in the carrier. The board can be moved by hand along the table, so that its distance from the lens can be varied from six inches to eight feet, according to the size of the picture required.

Focussing is effected with a sheet of white paper stretched on the board so that it presents a smooth white surface when illuminated; an image thrown on it can be examined by a hand magnifying glass held a short distance away. On the white surface are ruled faint lines showing the dimensions of various sizes of pictures, the centre of the picture being the centre of the board, which is also in the line of the axis of the lens. Any size of bromide enlargement can be obtained by moving the board approximately to the right distance, a sharp image being then secured by racking the lens in or out.

By practice it is found that a ground-glass illumination is by far the easiest with which to obtain a good picture (better than the sky illumination, as clouds are apt to spoil its uniformity), but the precaution must be taken that the glass is placed some little distance from the negative, say as much as nine inches, and that it has an area of at least three times that of the negative, and that it is illuminated fairly equally throughout. The reason of this is that a less area will not illuminate the margins equally with the centre of the image, and that there will be consequently an unequally-exposed picture. The importance of a large field of illuminated glass is not to be underrated.

Glass ground in the ordinary way will not be effective. It will be found that a certain amount of direct light will penetrate, and that this will give a more exposed centre in the print. Either two pieces of ground-glass should be put back to back, or, better still, one piece of glass should be ground on each side.

To grind a surface of glass is a simple and easy operation. A sheet should be selected which is level, and the roughness be produced by grinding the surface with a small piece of flat glass and emery powder and water. The finer the emery the finer the grain. When a sheet of glass has been ground on both sides it is placed in position behind the negative. A convenient way is to fit a small box outside, of such dimensions that the glass may slip into grooves.

If the electric light is employed it is placed about four feet from the glass, and a circle of light formed to take in the square of glass by means of a largish lens on a stand of about nine inches focus. This plan will give good, even illumination. If the sun is to be employed, the same procedure takes place, except that the beam is reflected by a heliostat or mirror, and, if necessary, by a second mirror, through the condensing lens on to the ground-glass, and a good illumination so obtained. The ground-glass should be sufficiently removed from the negative to prevent the grain of the glass showing any effect on the print, and the illumination of the negative is such that a very large size of image can be thrown on the focussing surface, and yet nearly all details will be visible.

This is a point of some considerable value, for very much depends on the sharpness with which the enlargement can be focussed.

To focus the image is the next matter. The lens to be employed, of course, varies with the size of the negative. It is not a bad rule to follow that the lens which will make a quarter-plate, may be used for enlarging a quarter-plate, a half-plate, and so on. It will be found that satisfactory results will be got by observing it. Of course, a half-plate lens may be used for a quarter-plate enlargement.

All that the rule is intended to convey is that a lens should not be used to enlarge with, which is only intended to take a smaller size of picture. It is to be remembered that the negative is in a fixed position, and it is the lens which projects into the dark-room which can be shifted by a rack-and-pinion motion, or the ordinary

screw motion, nearer or further from the negative.

The size of the enlargement having been determined, the board with the white surface attached is moved approximately into position. This is easily done. Supposing the longest side of a half-plate has to be enlarged to twelve inches, and that the focal length of the lens employed is five inches, then the board must be moved closely to twenty-five inches from the negative, as the enlargement is four times linear. The lens is then racked out till the image appears sharp at about one-third of its distance from the centre of the board, when a large stop is employed. The diaphragm is then diminished until the whole appears in focus.

A capital aid to focussing is a large reading glass, which can be held some nine inches from the focussing surface. Detail can be readily seen with it, and it is this detail which it is important should be sharp. When the image is found to be sharp all over the next operation may be performed. This is stretching by means of drawing pins the bromide paper surface on the focussing board. It is only necessary to place a yellow glass in front of the lens to allow this to be done with great certainty, and without impairing the paper by hurtful exposure. This being done exposure may take place.

Trial slips of bromide paper crossing the most difficult part of the negative we have found to be the best way of determining exposure, and an economy in time and in material. Every negative will vary in density, and it is hard to judge from the feeble image what correct exposure may be. The trial strips, however, will enable us to accurately gauge the exposure, and large sheets of paper will not be uselessly sacrificed. The use of trial strips may be further extended by shading the darkest parts of the prints (*i. e.*, the most transparent parts of the negative) and giving the densest parts a greater exposure.

The best negative for enlargements, it must be recollected, is that which will give a feeble print on, say, platinum paper. Were there no scattering of light by the grains of silver, the negative that gave the best contact print would give the best enlargement. But, as there is scattering of light, a negative in the position in which ours is, being at a distance from the lens, the densities appear greater than they would actually show when measured by the plan we have adopted. Thus it is that a feeble negative at a distance from the lens appears to be of proper printing density. In the case of dense negatives a full exposure and a rather short development are necessary, while with a thin negative the exposure is less and the development rather longer.

When the strips show that the high lights require longer exposure than the dark shadows, the shading is done by a suitable cut-out card, which is held near the surface of the bromide paper. It is not kept still, but always slightly moved about to prevent marks due to the different exposures from appearing. In a somewhat similar way clouds may be inserted in a print by marking roughly the position which the sky-line of the negative occupies, and exposing to the cloud negative the portions not so occupied, gradually shading off the exposure so that no marked junction exists.

Broadly, it may be said that the total exposure to a negative will vary between twenty seconds to five minutes. In regard to the kind of bromide paper that should be used tastes differ. Some would prefer a rough surface, and others a moderately smooth one. If anyone fancies himself to be extremely artistic, no doubt the rough paper will commend itself to him, and if the image be somewhat out of focus so much the better. Such a print will not bear near inspection, and it will only be when viewed from a distance that its meaning will be evident.

For our own part a moderately smooth surface suits our taste best, for with a sharp negative sharply focussed on the paper every part of the print will bear inspection, and present a pleasing contrast to one in which these are wanting. At the same time it must be recollected that in making a print by this plan the manipulator has a great power of making his print artistic by the method of shading, very much in the same way that the old calotypist could put art qualities in his picture by the use of the brush during the development of his negative.

In regard to the development little need be said. Ferrous oxalate gives a beautifully black tone, and a good deal of artistic work may be put into a print by the use of the brush charged with more or less strong

developer, after detail has appeared. But this developer has the drawback that it is impossible to predict for how long the whites will remain white. There is always a danger of a trace of the iron salt remaining in the pores of the paper, and a consequent yellowing of the whites. Were it not for this, the ferrous exalate developer is an excellent one to work with. Failing this an alkaline developer that will not stain paper must be employed. Perhaps metol is that which gives the best tone, but amidol may also be used, and gives very velvety blacks. Ortol must be barred, as, to our mind, must also hydroquinone. With these two developers there is always a danger of the staining of the whites, a stain which is very difficult to remove.

Having chosen the developer sufficient must be made up to well cover a dish large enough to hold the print without folding it, and great care must be taken that the solution covers every part at once, or rather without stoppage. The paper, of course, must be wetted before the developer is applied, but even then care must be taken that the solution covers all the print evenly and without stoppage. Every detail should be brought out, but development should be arrested before any of what should be the pure white spots become clouded by deposit. It is not a bad plan to have a little weak acid and water ready to flow over the print after the developer has been removed, and a slight wash given to the paper. This stops all subsequent development, and will save markings caused by the development continuing in the fixing bath.

The fixing bath should be quite free from any discoloration, and plenty of it should be available. The washing after fixing should be very thorough, as the hyposulphite itself, if left in the pores of the paper, is apt to become decomposed, and give a yellowness to the whites, with a general degradation of the print.

The plan of enlarging given is one which has answered admirably in the writer's hands, and he has several scores of prints exposed in frames to light and ordinary atmospheric conditions. They are as pure in the whites, and as velvety in the blacks, as they were when made five years ago. Their cost is very little more than the price of the paper.

THE CONVENTION AND PROSPERITY.

A VERY conservative and very well-informed statesman recently told us that there was every indication of a long period of prosperity. Such seems to be the opinion of most business men who have good opportunity for judging.

Certain it is that the country is at present prosperous and that people have confidence. Photography is one of the first businesses to feel any scarcity of money, but it is also—in spite of what the croakers say—one of the first to share abundance. Photographers have had little cause to complain and much to be thankful for during the past two or three years. Men who have been in a tight place for years have got fairly on their feet; and men who were making a living have now saved money.

The best kind of prosperity is that which reaches the greatest number, and judged by this standard the present prosperity is not found wanting. It is sometimes said that a few men are "getting it all." Never was there a greater mistake. There are more men in the profession than ever before, and the more there are in any line, the more prizes there are and the more competencies.

The trend of photography is, and has for some years been, upward. Remove every man of the "new" school from the ranks, and there would be more men practising the old than practised it when it was the "only" photography.

One of the greatest advancces which photography has made has been in the direction of variety. Contrast the *carte-de visite* on its quaint mount, with the Celoron panel of to-day. Thirty years ago a photograph was just a photograph, and little more. To-day we are working in carbon and platinum and aristo. Or we can turn out a developed print almost "while you wait." The old fetish of size bothers us no more, and we have a choice in mounts which would surprise our fathers.

What is the reason of the change? Is it that things have "just happened so?"

There has been no such thing as chance in this movement; it is one for which the photographers must thank themselves, their supply houses, their customers, and their journals. Never has there been a time when the supply houses, large and small, have been so active in planning new things. Never have they put so much taste and value into the things they have planned. The customers have been quick to respond to the awakening of the photographer. How often we find them ready to pay well for something that is new—and good. With many people it is a question of the right thing rather than a question of price. And they know that the right thing is worth paying for.

The journals have been a big factor toward success. The man who does not read is the unprogressive man. Successful photographers are read about in the journals, and new methods and new ideas. The progressive man takes an interest in his fellow-worker.

The progressive man's development is very easily traced. He walks down the street to look at the other man's showcase, and he gets an idea. There are lots of ideas in showcases. He goes back home and arranges his showcases to go one better. And so he and his neighbors go on, one against the other, until both those showcases are well worth looking at. They have been busy in other directions at the same time, and so it turns out at last that instead of one coming out on top they are both going ahead. One of them suddenly finds to his astonishment that he has a few dollars in hand. He runs down to New York, or San Francisco, or wherever his town may be, and he brings back an idea or two. There is no need of him to migrate to a big city. There's lots of room for good work in small places. To think that the big city is the only place is one of the greatest mistakes possible. Now, about this convention. Are you going? Do you know that it is going to be a glorious success all around? The Western boys have it in hand, and they are not the ones to do things by halves. Stein is at the head of affairs, and he makes a success of everything he tackles. Edmondson is doing his share—and more. So is Sperry; so are lots of others. Milwaukee will show America what a convention can be.

Are you going to the convention to support the convention? Nonsense. The convention is simply a meeting of photographers, and they are not out for any supporting, they are out to do themselves good. If you rub shoulders with five hundred fellow-workers you cannot help being improved. You do them good, and they do you good; such is the way of the convention.

It will cost you solid cash to go to the convention, and the convention will give you solid cash in return. If you are afraid about the money, board cheap at Milwaukee and put in time with the pictures. But if you can't afford to go, remember that you are just the man who cannot afford to keep away. There is not a single really successful photographer—and I mean successful financially—who is not a wide-awake man. The livest men in New York to-day are the most successful men. They know most everybody's work and they keep in touch with the latest. The only way for a man outside one of the great cities is to turn up at the convention. If a visit does not pay him handsomely in pleasure and in money, he must be a very unfortunate or very uncommon person. Look at it as a necessary investment—and go.

NEWS AND NOTES.

Copying Old Documents.—We were recently consulted in regard to a photographic matter concerning the detection of a suspected alteration and erasure. The document was some years old, and the ink was much faded. This was a case in which the folly of the common advice to attempt restoration was self-evident.

The copying of old manuscripts is becoming increasingly common, and several photographers are specialists in the work. There is one rule which should be followed with all valuable documents, however much they may be faded, and that is, don't attempt any faking or restoring of the original. A slow plate, not overexposed, and

developed with ferrous oxalate will often give what is required. The use of an orthochromatic plate, with or without screen, depends on the color of the negative, and its choice must be left to the discretion of the photographer. For a document that is very much faded or stained there is an excellent treatment. The formula and method are, we believe, the suggestions of Mr. Julius F. Sachse. Develop the negative with an eiko-hydro developer until the detail is well out, fix in acid fixing-bath, wash well, and when thoroughly dry, bleach out with the usual bichloride mercury and sal ammoniac solution, wash in running water for fifteen minutes and when dry place in front of a dead-black surface and photograph. The resulting negative can then be, if necessary, intensified. Excellent results have been obtained by this method, the greatest advantage of all being that it works no possible injury to the original.

Overdoing the Art Side.—The exhibiting amateur is prone to break out wholesale in some special direction. For a year or two fashion will run at fever speed on sheep, or old people, or sunsets; then to some other line. A couple of years ago a well-known English professional worker, F. M. Sutcliffe, had a saddened soul on account of the then prevailing fashion, and he thus delivered himself: "Honesty is the best policy." Much of the widely-expressed dissatisfaction with many photographic pictures is on account of their dishonesty. As people become more acquainted with photographs and photography, they become more critical and exacting. They no longer accept, or are pleased with, photographs which pretend to be one thing and are another.

A photographer goes out on to the mud flats, the sun comes out; he inwardly or outwardly uses uncomplimentary language to the sun for shining so brightly, but the sun blazes on. The photographer says he must get some pictures, as there is only another week before such and such an exhibition opens. He, therefore, chooses his subjects, and takes them, as he must, in full sunshine, with blank skies. When he gets the plates developed, he thinks that, to make them pictorial, he must remove all traces of the sunshine which bothered him so. With one dodge and another he makes the sunshine disappear, *almost.* There is in nine cases out of ten just enough left to make the trickery apparent, and the result is a failure and an imposture to the unpractised eye. There is, of course, no harm in making experiments of this kind, but there is no need to exhibit them all. It may be taken for granted that anything which the photographer has derived pleasure from seeing will please other people, if he has secured something of that which gave him pleasure. But to make photographs, and call them pictures, simply because they have been made to look like other photographs which *have* pictorial quality, just for the sake of getting a medal or award, and not for any pleasure, is wrong.

To reduce bromide prints immerse them in a bath composed of 4 per cent. solution thiocarbomide solution 50 parts, saturated alum solution 50 parts, acetic acid 1 part. Reduction is slow and the action is stopped by removing the print to running water. If running water cannot be used wash in a number of changes and keep the print moving for the first few minutes.

It is sometimes said that platinotypes fade, but the trouble is usually in the paper support, and not in the platinum image. If you have a print with yellow whites and rusty blacks place it for a few minutes in a solution of carbonate of soda 3 parts, chloride of lime 4 parts, water 18 parts. This will restore the picture, and it should then be placed in a weak hydrochloric acid bath for a few minutes, and afterward washed in water. Remember that permanency depends more on the thoroughness of the worker than on the choice of a process.

Aluminum, which has been a manufacture for less than fifty years, is now produced to the extent of 4000 tons annually, more than half of it in the United States. Its price has fallen to one five-hundredth of what it was in the beginning.

Does backing a plate render it slower? This is a chronic question with English workers, and the more they settle it by making tests the more they discuss it. An article dealing with the question appears on another page.

A DÉBUTANT

By Philip S. Ryder, Syracuse, N. Y.

STUDIO TRADITIONS OUT OF DOORS.

THERE is a photographer in this city who has no studio. It is the old story of burnt out and no insurance. But with an enterprise strangely out of place in a man who will let himself be "broke" in such a commonplace but effectual fashion, he is building for himself a new business, and on lines quite new to him. He is busy with at-home work, and in some way he has managed to get hold of some wealthy people. He can do good work, and they can appreciate it, and so together they get along satisfactorily. They are pleased with the work and he is pleased with good money.

At this time of year photography "at home" means photography out of doors, on the stoop, or in the garden, and some very beautiful and "unprofessional" pictures may be obtained in such surroundings. This photographer has just shown me some proofs of children in the garden. The children are well photographed and make such pleasing pictures that they attract attention from those who do not know the little people. But behind the children there are trees, and through the heavy leaves the light struggles, covering the upper part of the print with little round patches of white. So insistent are they that I am almost tempted to forget that sago is manufactured from the pith of a tree, and to think that here we have a botanical curiosity. Why did he get such a result? By using a hundred-dollar studio lens with big aperture and little depth of focus. If he had written through to Hyatt and sent a ten-dollar bill he would have got a second-hand lens which would have been better for his purpose. The special lens which the photographer uses in his studio does not possess any secret mystical virtues. Its virtue is that it works with a big aperture, and so by including a big lot of light reduces the time of exposure. But it gives the illumination in the centre of the picture, which is all right for studio work. When worked at a wide aperture it has no

By Philip S. Ryder.

depth of focus. So much does it lack in this respect that if part of the face is in focus the rest may be hopelessly out.

AN ITALIAN PEASANT GROUP.
By H. Randall.

In working out of doors we should seize our new conditions. Be thankful for a change from studio work and take advantage of the change. Don't use your dull day lens when it is bright out of doors. Go slow or you may overexpose. This is a greater trouble than lack of light. If my photographer friend had been an amateur he would have taken his little ten-dollar camera and perhaps without even a tripod would have given one-tenth or one-fifth second, standing some little distance from his subject, and would have got a better picture. His trees would have been trees, not sago-fruit, and they would have been more artistic. There is a sort of idea that one object must be the most prominent in a picture. Very good. But too often we try to emphasize this prominent object by killing the surrounding ones. And we may do this by throwing them out of focus. Don't be deceived. You can sufficiently subordinate the background without so distorting it that its very horribleness makes it noticeable; and your customers will be better pleased.

Have you ever heard that remark made by fond mammas that they like the picture of their little girl which was taken by an amateur friend better than the one which was taken by a "real professional." They don't know anything about photography, but they can feel the naturalness of the subject and its surroundings as portrayed by the amateur. It's the lens that does it. The "average amateur" has considerable depth of focus; he gets detail all through his picture, and he has no noticeable distortion. He probably uses either a wide angle or a rapid rectilinear lens, or he may use a cheap view lens. The rapid rectilinear is the most useful. Using a camera of say 8-inch focus a group of eight or a dozen people can be got on a 5 x 7 plate at a distance of about a dozen feet from the nearest figure. In working in the open air we can get as far away from our sitters as we wish. If space is limited use a wide-angle rectilinear and get as near as you wish to your group. Either of these lenses will give less distortion and much more depth of focus than your studio lens, and there need be no fear on the score of rapidity.

We have received from Mr. C. S. Bateham, Norwalk, Ohio, a copy of the list of awards offered by the Ohio-Michigan Photographers' Association at the first annual meeting of this combined association, to be held at Put-in-Bay, Ohio, August 21st to 23d.

The prizes offered are open only to members of the Association, but there is an open class, in which any photographer may compete. The conditions call for two pictures, with no restrictions as to size or subject. The first prize in this class is fifty dollars in gold; second prize, a gold medal; and third prize, a silver medal. An entry fee of two dollars must be sent by those desiring to compete in this class. Particulars may be had from Mr. A. L. Bowersox, Dayton, Ohio.

We are glad to note the well-merited success which attends our dainty but very practical contemporary, *The Photo-Miniature*. Nos. 13 and 14, just published, deal in a very interesting way with "Photographing Flowers and Trees" and "Street Photography" respectively, and are beautifully illustrated.

OUR PICTURES.

WE are at once fortunate and unfortunate in our illustrations this month. Some weeks ago we were shown twelve portraits of a child, by Mr. W. M. Hollinger, of this city, and were charmed with their simplicity and quiet elegance. At our request Mr. Hollinger assented, willingly, to our use of one of the negatives for our frontis-

D. Bachrach, *Baltimore.*

MR. E. KEYSER,
Sculptor, in his Studio.

By Hollinger, N. Y.

given, although they barely suggest more than the poses chosen by Mr. Hollinger. The point that we desired to emphasize in their reproduction is that, although twelve negatives were taken and twelve finished prints submitted to the customer, each portrait gives a different pose and a different expression of the subject, over and beyond which it should be noted that likeness is the predominant feature in them all.

Taking the series of twelve prints, as they were sent out from the studio, they formed a strong argument in favor of Mr. Hollinger's plan of submitting finished prints only to the customer—to be retained or returned according to the customer's satisfaction in them. We were pleased to hear from Mr. Hollinger and his business partner, Mr. Oettinger, that they have had a most prosperous year, and that the studio has for some time past had as much work as could be satisfactorily carried through day by day.

In the three portraits by Mr. F. H. Rice, of Worcester, Mass., we are more fortunate in being able to offer reproductions which properly show this gentleman's work to advantage. Mr. Rice is a young man in his profession, and shows considerable promise in his work. He has recently succeeded to the business of Mr. Ferdinand Flodin, now in Sweden, and worthily upholds the high quality Mr. Flodin put in his portraiture while among us.

The portrait of Mr. E. Keyser, by Mr. D. Bachrach, of Baltimore, made in the sculptor's studio at the Maryland Institute School of Design, is an interesting example of portraiture made under difficult conditions. It includes two well-known pieces of Mr. Keyser's work, viz., a bust of the poet, Sidney Lanier, and the "Toying Page."

Finally, we include two pictures by Mr. Philip S. Ryder, of Syracuse, as promised in a former issue containing other examples of Mr. Ryder's work. In both

piece. This picture we have much pleasure in presenting, as a late example of Mr. Hollinger's portraiture of children. It is a delightful bit of work, as well as a "speaking likeness" of the little lady, with whom we are well acquainted. So much for our good fortune. We are sure that our professional readers will be glad to see a portrait so thoroughly representative of Mr. Hollinger's individual style.

Desiring to make the most of our opportunity, we embraced the chance to secure other four portraits of the series, and these will be found engraved in our pages. Unfortunately the reproductions do not in any adequate way represent the beautiful platinotypes, which we sent to one of New York's most prominent engraving firms. There was not, however, time to get new blocks made, hence we must content ourselves with those here

these portraits the reader will find suggestions useful to him under the skylight, and this, together with their excellent technical quality, justifies their appearance here. The little "Italian Peasant Group," sent by Mr. H. Randall, of New Haven, Conn., was a chance exposure made during a trip through Italy. The shadow effect is peculiarly happy, and adds much to the interest of the picture.

RETOUCHING.

BY E. ALLERS.

THE first introduction of retouching was one of the greatest advances ever made in the interest of professional photographers. The old unorthochromatic wet plate used to make such terrible examples, sometimes; and its beautiful and microscopic definition was very cruel on any blemish or defect. The introduction of retouching was the death of the old full-length *carte-de-visite*. When a photographer found that he could "clean" a face he naturally began to make that face larger, knowing that it would please the customer; and so bust portraits came into fashion, and large heads and many of the specialties which increase business.

We often hear retouching condemned as inartistic, as is photography itself. But there is no immediate prospect of it going out of fashion in spite of the clever work of the new school. There are changes and cycles in retouching as in every branch of work, and there may have been a time when it was much overdone. There are yet many firms who over-retouch, but the very existence of their work tends to prove a very good general level, for it is seldom seen except on a very cheap class of work. The better the work the less and the more careful is the retouching. The reason of this is simple. The cheap photographer looks upon retouching as a leading and necessary part of his work. The other man pins his faith to good work all round. He lights carefully and exposes carefully. Retouching serves not only to remove defects, which may often be reduced to a minimum by careful lighting, but it also is used to show modelling. Modelling can, however, be obtained much better if it is worked for all through than if it is just left for the retoucher. The poor retoucher who has a careless or unsympathetic operator making negatives for him is a man very much to be pitied. Not only is it impossible for him to get good results from the negatives, it is also disqualifying him for good work at any time. The common way for the retoucher is, too often, to work so long and no longer on a negative. He removes wrinkles, works in a few high-lights and gives a general enamel finish to the subject, more especially if it be a woman in evening dress.

By F. H. Rice.

The correct way is to handle each nega-

tive with an intention to retain as much of the personality as possible—and this is destroyed when "cleaning up" is the first consideration. We often hear it said that time has dealt kindly with some person. Follow the example of time, and deal kindly. This dealing kindly means that time has not emphasized lines of sorrow or hard wear or age. There is a distinction between mere marks of age and marks of sickness or feebleness. Reduce the latter, but deal carefully with the former. The placid restfulness of many an elderly face is a beautiful thing which should never be destroyed.

The whole question may be reduced to one thing. Give individual consideration to each negative. With practice it is as easy to size up a negative as a print. The best paid retouchers are those with the broadest knowledge and the widest experience. Speak to one of the men who is making the most money as a retoucher. He will tell you all about the work turned out by any one of the leading men. He could pick out, by the retouching alone, the work from any one of the best galleries. He can talk on the work done in England or Germany or Russia or France, and he can talk best of all on the faces of well-known people. As you listen to him you will feel perhaps more than before that the face is a wonderfully mobile and varied thing, and that in its finer distinctions it can never be reduced to any hard-and-fast rule. Retouching will stay with photography, but there is room for vast improvements in its workings.

AN IMPORTANT CORRECTION.

In our March issue we published a portrait of the gentleman seen in the accompanying engraving. The portrait was an

By J. W. Taylor, Rochester, N. Y.

unusually good example of work, and, according to our information, was credited to Mr. George Rogers, of Binghamton, N. Y., as the maker. As soon as the Magazine was published Mr. Rogers wrote us that an error had been made in the matter, and that the portrait had been made by Mr. Theodore Rogers, now with the Albany Art Union, Albany, N. Y. We at once wrote to the latter, explained the blunder, and promised correction. No reply being received, we duly corrected the error in our April issue. Upon the publication of the April number there came a letter from Mr. J. W. Taylor, of Rochester, N. Y., claiming that the portrait was made at his studio. We are, therefore, glad to put the matter right, and give Mr. Taylor credit for the work. In his letter Mr. Taylor tells us that the subject of the portrait is "Jack Turner," an English ex-pugilist of note. He also enclosed other photographs of the subject, from which we reproduce the one here seen. This is, perhaps, a better type than the one reproduced in our March number.

If your negatives come up spoiled by sulphur-fumes, which they may do, owing to your carelessness in storage, do not discard them. They can be cleared by flowing them with a 2 per cent. solution of ferridcyanide of potassium. The same treatment will clear green fog. The plate must be quite free from hypo.

COPYRIGHT IN ENGLAND.

THE English copyright law has an especial interest for American photographers, with whom copyright legislation is a perennial question. English copyright is in a state of much confusion, being contained in some ten separate acts, running back for from 15 to 150 years. On the whole, this state of things has been satisfactory, for out of chaos the English photographer—who can put up a good fight against publishing pirates—has hammered several very satisfactory decisions. Just now the photographers are in arms against proposed alterations. Those great men—the painters—are trying to remodel the "Fine Art Copyright Act," and, painter like, they wish the photographers to be left out in the cold.

The original bill as proposed was so unjust that the photographers killed it—they have a live copyright union over there—and a new one has been drafted. This is much fairer to the photographer, and at the same time protects publishers from blackmail.

In a recent address to the London Photographic Club, Alexander Mackie made some remarks about the proposed new act, from which an idea of its scope may be obtained. It will be seen, especially from the final sentences, that the bill tends to err in favor of the photographer. Whatever defects the bill contained were due rather to a lack of acquaintance on the part of those who drafted it with the requirements of photography as distinct from the other classes of fine art. In the new bill the term of the duration of copyright has been altered to life and thirty years after the end of the year in which the owner dies. Of course there was no objection to this. Of particular interest to photographers were the regulations under the heading "Special Provisions." It was obvious that rules which might be applicable to paintings might not all be applicable to engravings. A painting was a definite thing in itself, and an engraving was created from something else. In photography we must have the negative and the print, and the special provisions deal with the differences between these. Copyright exists from the date of production, but under the new bill nothing is said about registration, which is required by the present act. He thought that there was a great deal in favor of continuing the clause providing for registration. It may be a pity that one should be called upon to pay for what is already his, but the fact remains that millions of photographs are taken with no prospect of their acquiring any exceptional value, until one day circumstances render them of considerable marketable value and they are registered. Registration provides a ready means of proving title to a photograph.

Under the new bill the owner for the time being of the negative shall be deemed to be the author, and an assignment of the copyright may be made by delivery of the negative or by the assignment of the copyright in writing. Now, if the owner is the author and the photograph keeps changing hands, it becomes possible that the copyright may never cease, being in existence for the life of the author and thirty years. This was absurd, of course, and assignment of copyright by delivery of the negative would be found impracticable. As one present remarked, quite a number of copyrights would fall to the share of the dustman. Copyright under the new bill belonged to the author, even though he may receive valuable consideration for his work. The right to print photographs in the latter case, however, does not go with the copyright. Permission must first be obtained from the party for whom the work was done. On the other hand, the person who pays for the photograph must go for further copies to him who took it, as the copyright belongs to the latter.

IN England a movement is on foot among amateurs to send prints from their negatives to the Netley Hospital, where the wounded from South Africa are cared for. It is to be hoped that the photographs will be "well-edited" before reaching their destination.

AT a recent demonstration of Velox paper it was said that there was only one important thing to be remembered in its manipulation, and that was correct exposure. With a correct exposure it is impossible to overdevelop.

ABOUT METHOD.

Of the many causes to which failure in business is ascribed, want of method is the last thing that would be admitted, though more often than not the real reason of ill-success. We hear often enough of such explanations from bankrupts themselves, as "want of money," "want of opportunity," "bad luck," "bad debts," etc., but if the official receiver could be induced to state the causes of the majority of failures which come under his notice, he would say "want of prudence," "want of tact," "want of knowledge," "want of purpose," and above all things, "want of method."

By Hollinger, N. Y.

Yes, write it up large: Want of Method; the true cause of half the failures in life. It has broken up homes, destroyed life's prospects, blighted ambitions, wrecked businesses, and broken men down in the heyday of life with worry, anxiety and sorrow. It has sent men to workhouses, lunatic asylums, and prisons—aye, and filled many a grave. Yet men will go on trying to do business without method, heedless of the lessons they should learn by the sad experience of others, and blind to the teaching of their own bitter experience when trying to run a business in which method is either inadequate or totally absent. Day by day they are worried by troubles arising from their own errors, or the mistakes of their employés, or harassed by inability to get business done to time, or to make ends meet, and yet they cannot or will not see that the remedy is in their own hands. They blame employés when they should blame themselves. If employés are left to do as they please, it is foolish to blame them if they go wrong.

Let every business man ask himself when a mistake occurs, whether he could not have done something himself to have prevented it, either by giving his employés proper instructions, or by devising a system of checking one man's work against another's, which would prevent the possibility of such an error.

It has been well said that the employer should be captain of his ship, and his presence be equally necessary to its safety; even in very large concerns, which may be correctly described as a series of small concerns worked under one management, the employer should generally superintend,

and by his books be generally cognizant of the principal details of his establishment.

We too often hear the heads of businesses say: "How can I find time to see after every little detail? I cannot be on the spot always, I have to trust my employés, and they will go wrong sometimes." True, but how often may an error be averted by constant anticipation, watchfulness, and organization. To our mind, an employer who excuses himself to a customer by laying the blame on his employés, accuses himself of weakness, if not incompetence. Never let your customer know or feel that you mistrust your men, or that you have no confidence in some particular department. It implies at once a weak organization. Take the blame on the shoulders of the business as a whole, set the matter right with the customer without entering into long explanations as to what this or that man or department ought to have done, and when you have finished with your customer, review the causes which led to the mistake, delay, or trouble, whatever it may have been; but before anything else, sit down in your own private office and review yourself, and reckon your own responsibility. Don't haul the offending employé on to the carpet and lose your temper in abusing him. Just quietly talk the matter over with yourself. Try to kick yourself, mentally, for having a business in which a mistake was possible. Wasn't there something you might have done to avoid it? Isn't there a want of method about your business? Isn't your correspondence loosely conducted, and are not your letters badly filed, your books badly kept, your orders loosely given, your shop untidy, and your men allowed to become slovenly and unpunctual in their habits? Depend upon it, there's a screw loose somewhere.

Men are very much what their masters make them; their habits as a rule reflect the style of business as a whole. In well-managed businesses will invariably be seen bright, intelligent, tidy-looking men, whose every action shows their briskness and smartness. Every man has his place, and every man is in his place. There may not be an air of hurry-scurry and bustle; it is rather like looking at some intricate piece of machinery, some parts of which go slowly, some more quickly, and some with great speed, but each moving in its appointed way at its given rate, and the whole uniting to turn out something perfected and finished from the raw materials which were put in. There is a master hand and master brain to start,

By F. H. Rice.

stop or guide the machine, and if he does his part aright, the mechanism does its appointed work.

"Method," says one writer, "digests the matter that industry collects; it is a habit of saving time to all, and without which no business of any size could be carried on. It apportions time to duties; never trusts to memory. Diaries and indexed books are cheap and invaluable. Arrangement keeps, by means of books, an exact registry of every transaction; it has a post for every man, knows what every man does, a place for every tool, a pigeon-hole for every paper; it keeps all books posted up, by which you are cognizant of what you are doing and have to do, enabling you to send out your accounts to time and make your collections promptly."

If men who are in the position of employers or managers would only study Nature a little, they would see what splendid lessons she teaches us, how everything in the universe has a place "where, though all things differ, all agree." But there are so many men in positions of responsibility who go through life seeing without learning. That is the reason why great success in life only comes to the very few, and they are invariably men of method.—*Process Work.*

NICHOLSON'S NEW TRIMMER.

SINCE the introduction of the circular and oval pictures now so popular photographers have found much difficulty in the narrow margin of white surrounding the print. This margin adds much to the effectiveness of the print, but to get it of uniform width and true has always been a difficult thing to accomplish. By means of an ingenious improvement on the old-style revolving trimmer, this difficulty has been entirely overcome. The new helper is Nicholson's trimmer, introduced by Mr. H. A. Hyatt, of St. Louis, and obtainable from all dealers. This trimmer, which is illustrated in Mr. Hyatt's announcement on another page, trims oval and circular prints, leaving a narrow white border around, of absolutely uniform width, with a single form. In all its parts, except the cutting wheel, it resembles the old revolving trimmer. The cutting wheel is so constructed as to run against the cutting form, as the old ones do, but to leave one-twenty-fifth of an inch of white margin around the print. The improvement is well illustrated in the accompanying engraving, reproduced from a portrait by Mr. Nicholson, of Oshkosh, Wis.

Mr. Hyatt tells us that the new trimmer has met with instantaneous success, and is now used in a majority of the best galleries in the West and Southwest. It is one of those conveniences which speedily take their place as indispensable, and every well-appointed gallery should possess it.

RAPID AND WHOLESALE DEVELOPMENT.*

BY W. D. WELFORD.

It has been said, and no doubt with a considerable amount of truth, that concerning photographic discovery the amateur has taken the lead. We may qualify the assertion, and we will, by asserting that this was in the early days of photography. Nevertheless, the impression is distinct that we owe so much to the amateur, and you must pardon me a little if, for a wee bit, I champion the professional and the trade worker. Without doubt the professional runs in as many set grooves as he can, 'twere folly otherwise, from a business point of view. Chopping and changing to the amateur is pleasure; to the man earning his living by photography it spells loss—loss of time, loss of material, loss all round. The amateur has just as much fun and enjoyment over failures as with successes, but the professional cannot, in justice to himself, view failure with the same amount of equanimity.

Thus it comes that in the past, and even in the present, the amateur is the one who dares, who departs from handbook precepts, and who, in so doing, benefits his fellows by finding out something. All praise to him for it. At the same time let us not forget the professional worker, who consolidates by actual work what the amateur has merely skimmed over. I grudge the amateur nothing, I only plead for a slightly better recognition of the professional and trade worker's services. An invention remains an invention, a discovery no more than arouses interest, until one or the other has been put to a practical conclusion. It is the man who earns his living by photography that proves the case. The amateur may find the skeleton, but he leaves the professional to provide the body.

I am myself both in the skeleton and the full body line of business. You will, doubtless, remember my championship of ortol as a developer, both in the photographic press and at meetings of societies. My first impressions were gained in the amateur profession, by the trial of a few plates; but I was afterward able to confirm these from the commercial point of view. You may remember that a large amount of fun was produced by more or less sarcastic hits at what I may call my "table of quantities." In the article in one of our photographic journals upon "Ortol," I gave a list of plates, films, etc., that I had developed with that reagent. The only

By Hollinger, N. Y.

* A paper read before the London and Provincial Photographic Association.

idea I had in so doing was to show that the remarks I made, and the conclusions I had come to, were not founded upon the two or three trials that the ordinary amateur might make, but rather that they were the results of sufficient experience to justify conclusions. The "table of quantities," however, was not, I am afraid, taken in this light, and considerable ridicule followed.

By F. H. Rice.

But my idea then was, as it is now, that, whilst a few trivial experiments may prove the possibility, it is to the practical carrying out of the idea that we should look for the probability—in other words, it is the practical worker who proves absolutely whether there is anything in the matter at all.

And here I feel I must have a go at the scientific expert, and I go for him in precisely the same way as I have already described the amateur's function. He does not test by practical rules. Test tubes, and conclusions carried out to the seventh or eighth decimal prove but the germ. The professional who exposes and develops two or three thousand plates or films can gauge the value of the new developer, or whatever he may be trying, very much better. Failure with him means serious loss; failure with the scientific expert, perhaps, merely provides him with copy for his next article in one of our periodicals.

Now, the point with which I am concerned—namely, rapid and wholesale development—is just one which has shown me pretty clearly that we may learn much from wholesale work—that is to say, using a method or process upon a very large scale. In my own case time was an important item, as it cost money and inability to supply lost orders. Therefore, our efforts for some time have been mainly directed toward turning out the work at a greater speed. Of course, conveniences for washing and drying were soon devised; and by the abolition of printing frames altogether, and printing four negatives on to a film at one time, we gained further rapidity. You will, perhaps, gauge our efforts best when I tell you that we found it paid better to do away altogether with our original transparencies, and to substitute larger ones containing four each, the difference being simply that of having, say, a single whole plate to handle as against four quarter-plates. At first thought you would deem this a very slight matter indeed; nevertheless, we found it worth three or four dozen extra negatives in a day's work. I may say here that our ambition was to turn out two gross of half-plate negatives per day, two

persons only doing all the work up to hanging up to dry.

But all these details were quite secondary to development. We could push on in the exposing, or in the washing and drying, but right in the middle we were compelled to jog along at the mercy of the tyrant developer. So then we settled down to quicken that process. We were using ortol soda at the time, and making use of the strong feature of that developer its continuing action. I perhaps ought to explain that absolute density had to be coupled with the quick development, and that is where the difficulty lay. Our experiments merely proved that development to the density required took the same time practically whether a normal or an energetic solution was used. With an energetic mixture of one part ortol solution double strength, two parts carbonate of soda solution double strength, no sulphite of soda or bromide, the image appeared extremely quickly; but, alas! we had to soak for density—that is, we had to continue the development just about as long as with a normal solution.

I shall have the pleasure, later on, of showing you the continuing action of ortol, and at the same time Mr. Human will be able, I hope, to show you the development of a negative to full printing density in 18 to 20 seconds. We do some of ours in 10 seconds, but will keep to our original assertion of 20 seconds.

The developer he will use is a combination, but at present I am not at liberty to tell you anything about it. Not only does this developer act so quickly, but it gives greater density. If it should be thought that my idea of density, perhaps, goes hardly far enough, let me add that in our work we require absolute opacity in some parts. Take a border negative for instance, the part into which the portrait is printed, it must be left a pure white when printing from the border negative, and that means, of course, great density.

A question you may ask is, how this quick development can be made useful to others. Some of you, no doubt, fail to see any advantage in it, and I dare say there are many to whom development is a pleasure to be drawn out and prolonged as far as possible. They like adding minims of bromide to restrain, a few drops of soda or ammonia to quicken, breathing on a part of the plate, and all the little dodges. It

By Hollinger, N. Y.

adds, in their estimation, to the value of the finished result. All I can say is, I don't. I should prefer my plates to come out of the camera developed, fixed, and ready for printing. Therefore, provided I get good results, the quicker I can develop the more I am satisfied.

But to anyone who has the opportunity to expose correctly (or within a reasonable range of correct exposure), a number of plates, quick development will appeal. To the trade worker, the professional photog-

rapher who, knowing his studio light can take forty or fifty portrait negatives in a day quite near enough to correctness, or even the amateur who comes home with a few dozen plates, which by a preliminary test he finds are all about right, to all these speed in development will prove a boon. The tentative, and what I call the "patting on the back" methods, are all very well for a dozen plates, but when it comes to hundreds we get tired and want to work quicker.

I do not claim for this new developer that it will do everything. The very fact of its energy proves it to be unsuitable for over-exposure, and even for under-exposure it would require to be diluted with water in order to make it act more slowly.

To those who have no need for such quick work, but who yet wish to push on their development, I would strongly recommend ortol. In the experiment I will show you I take an exposed film and develop it until the image is well out, then I shall cut it, placing one-half in the fixing, and leaving the other in plain water. Personally, I use the stream from a tap, but, as I cannot do that here, soaking in plain water will show you, when contrasted with the half that is fixed, how enormously the action of ortol is continued; and, if this be taken advantage of, it helps considerably in getting through a big batch of negatives.

In conclusion, to refer back to the trade worker and the professional, it is when we are told that some thousands of negatives have been produced by a process that we place some reliance upon it. The two things in development I have spoken about I can assure you have been thoroughly tested for three or four months, and in constant use daily upon—well, never mind how many million negatives.

This paper is really only a few notes strung together somewhat hurriedly, and forms part of a series of development experiments that I am engaged upon, but I thought they might interest you, and perhaps provoke some discussion. I can, however, describe the whole idea in a nutshell. A friend said, "Is it wise to develop quickly when you can do it slowly?" To which I replied, "Is there any sense in developing slowly when you can do it quickly?"

INGENIOUS NONSENSE.

BY "PROFESSIONAL."

PRESIDENT LINCOLN once received a deputation of well-meaning and excellent gentlemen, who called to present him with a picture. It was one of those works with which we are all familiar, in which some well-known or topical subject is illustrated in line drawing, the lines being formed of fine writing and the writing describing the event.

This picture, of course, dealt with the emancipation question. There would be the usual kneeling slave, the cruel taskmaster, the plump, broad-brimmed abolitionist, and doubtless allegorical figures and various accessories would help to fill. The picture was presented, the deputation thanked, and the President left at his desk with his newly acquired treasure. He looked at it for a moment, and then, turning to the young artist who stood beside him, said: "They may call this sort of thing art. I call it *ingenious nonsense.*"

Abraham Lincoln was reared in the hard, rough, character-forming school of the frontier West; there was little chance for dilettanteism and much for hard common-sense, and on the hard common-sense lines he very extensively developed.

Is there not room for a cultivation of a little of this common-sense, even among those of us who are supposed to be extensively developed along the lines of high art? The art man usually takes the position of teacher and a superior. Why will he not teach we inferiors in language which we can understand? It is a fact that thousands of photographers will look at the production of some "eminent" and probably amateur photographer and will say to themselves "ingenious nonsense." Of course these thousands of photographers are not artists. How can they be when they spend so much time in earning an honest living; but they may be suspected

of having a reasonable portion of "hog sense." How if their verdict be the correct one? What a horrible thought.

Talk to the average, successful photographer, and what is his story? So common to them is the one expression that a statement might be printed which most of them could sign as correct. There is through it all the feeling of a reach after something better. There is the same working up against varied competition, the same years of just keeping going, and the same everlasting self-education and watching for an opportunity. The opportunity comes to some, and they seize it; to more it does not come, and so they make it. But it is only in the rarely exceptional cases that the man who does not deserve it lays hold of success. Does not the achieving of success betoken a certain ability; does not even the ability to make a living—the commonest of all abilities—demand a certain measure of consideration? Or is ability, together with a dozen other pleasant possessions, solely in the keeping of those whose grandpapas squatted on sections of land which have since risen in value?

Let the photographer study every picture that he can lay hands on. If the picture is beyond his comprehension let him get a translation of it if he can. But do not let him forget that for him the best teachers are those who have worked their way to the top in the ranks of professional photography. Photography is ever on the change—nothing can be in a healthy position which is forever changeless—and at present the change is the gradual one in the fraternity itself. The amateur in his striving after his effects has a complete change of base every few years. For when a good worker tackles a special line of subject he is at once copied by a dozen semi-competent people, and folks get satiated. By all means watch the amateur and take note of the much good work he is doing. But when he produces outré and wonderful specimens of portraiture, and tells you that they are the only ones, be sure that you understand before you accept. If you can understand all that is offered to you in this line it may be that you can do what the producer himself cannot do. If he cannot explain to you the glorious art of his production it may be that you "don't know much." But don't forego your American right of having an opinion, even if that opinion should lead you to say, or to think—ingenious nonsense.

THE NATIONAL CONVENTION PROGRAMME.

Monday, July 23d, 2 P. M.

Art Hall open to exhibitors to permit them to drape or readjust their pictures.

Tuesday, 24th, 10 A. M.

Opening of the Convention.

Address of welcome by Hon. D. S. Rose, Mayor of Milwaukee.

Reading of communications.

President's Address.

Reports of Committees.

Report on the Progress of Photography, by W. I. Scandlin.

Lecture by Prof. O. W. Beck. Subject: "What Are the Principles of Beauty in Art?"

3 P. M.

Demonstrations of the McDonough process in color-photography.

8 P. M.

Theatre party by special invitation of the Wisconsin State Association. Entire house bought out for the Convention.

Wednesday, 25th, 10 A. M.

Reading of communications.

Treasurer's Report for 1899.

Secretary's Report for 1899.

"Copyright Questions of To-day," by B. J. Falk.

Appointment of Committee on Nominations.

Routine business.

Lecture by Prof. A. H. Griffith. Subject: "Topics of Interest and Value to the Photographic Profession Generally."

Reports of Committees.

Informal discussion.

3 P. M.

Layton's Art Gallery. Lecture on the "Art Works in the Gallery," by Prof. C. E. Eldridge.

8 P. M.

Grand summer-night concert at the Deutscher Club, by special invitation of the Club.

Thursday, 26th, 10 A. M.

Reports of Committees.
Selection of next place of meeting.
Nomination and election of officers.
Lecture by Prof. O. W. Beck. Subject: "Does Lighting Insure Art?"

3 P. M.

Demonstration of the Ives-Kromskop process in color-photography.

7 P. M.

Excursion to Whitefish Bay.

Friday, 27th, 10 A. M.

Unfinished business.
Lecture by Prof. A. H. Griffith.
Awarding of prizes.
Adjournment.

3 P. M.

Grand Excursion on Lake Michigan on Crosby Line steamer, returning for the night trains.

PLATES *vs.* FILMS.

BY A. T. NEWTON.

WITH many photographers, especially professional workers, there exists a strong prejudice against the use of films, and these are found pinning their faith exclusively to glass supports for their sensitive emulsion. In a great measure this prejudice is fostered by the experience of those whose work is chiefly confined to an interior practice, and who, as a rule, do a large amount of portraiture. On the other hand, there are a large number of professional workers whose calling lies in what may be termed a more "general run of work," very much of which consists in supplying photographs for special trade purposes, entirely outside a studio portrait practice, and with such workers films are looked upon with favor when any particular kind of commission has to be executed. At the same time it would be going too far to say that for every kind of subject films are as suitable as glass supports.

The first real attempt to introduce films for all-round general work may be said to have originated with the Eastman Company; in fact, for many years, this firm has expended no end of money and labor in bringing to the present high state of efficiency not only their continuous rolls of sensitive material, but likewise the cleverly conceived apparatus for utilizing it; and hardly a season has passed, during the last ten years, in which some fresh advance in their apparatus has not been placed upon the market.

Their first stripping films are still remembered by many old workers, and not a few of them can still be found who look with satisfaction on the negatives secured by these strippers. The method of working them, at the time of their introduction, was, however, by many amateur and semi-professional workers, looked upon as too messy. Still, they were a step in the right direction, and undoubtedly have led to the production of the more modern "non-stripping" films, which have, during the last number of years, become such a feature in hand-camera work with journalist and amateur workers throughout the length and breadth of the world; and now we see numerous makers catering for the public's support in this material. That there are many first-rate qualities of films now on the market is a fact well known to all those workers who have experience in developing for the trade, and those other amateur workers, who merely press the button and send the rest to be done by their dealer or professional worker. At the same time it is too often painfully evident to a professional worker that much useful material, in the way of high-priced films, is so carelessly manipulated, and which turn out so large a percentage of failures, even under the most careful system of development. Of course, the quality of the films, in nearly every case, is blamed for such failures; whilst, in point of fact, the blame lies at the door of the worker who has exposed them. This, no doubt, has tended to give films a bad reputation, as compared with plates. There is so much

what is termed snap-shot work done nowadays, with novices who seem to look upon hand-camera work as the most simple thing in the world, that it is little wonder many professionals have come to form quite a dread when asked to develop a number of rolls of sensitive films, the treatment of which, as far as subject and exposure is concerned, is quite unknown to them.

On the other hand, there are those workers who from the very first have seen the advantage which lies in films for various classes of subjects, and these, it is only fair to state, have carefully studied the special treatment necessary when using them, and who invariably turn out as large a percentage of good negatives as would have been acquired with glass.

Of the many forms of hand cameras specially designed for the use of films, it would be out of place to speak of any one pattern in preference to another. That a patent monopoly should rest with any manufacturer for a particular method of exposing films, or rolls of such material, is only a fair recompense, considering the great outlay they have expended in experimenting and bringing to such a state of perfection the various forms of apparatus we now see designed for the purpose.

Every monopoly, however, does undoubtedly deter others from entering on similar lines, and hence we see so many forms of cameras limited to the use of films only, the outcome of which is seen in the exceedingly fine qualities which are now placed before the public; in addition to which there are several makes of films designed more particularly for use with special forms of cameras which are only available for them, and which form a striking contrast to the form of camera capable of exposing glass plates as well as films.

For quite a number of years it would appear as if most of the experiments conducted by manufacturers in the production of sensitive films lay in the direction of adopting such material only as dispensed entirely with the operation of stripping, and therefore, at first sight, it would appear a bold step for anyone to suggest a return to the almost original idea of producing a film that required stripping off its paper support before it was in its best condition for printing; yet it is a patent fact that two, if not three, of the latest productions, and for which improvements are justly claimed, are actually "strippers."

These new forms of stripping films are a long way in advance of the original form of strippers, and even during the short time they have been before the public have gained a splendid reputation for negative working. The first of these later-day strippers was placed upon the market by Mr. Wellington, and this was soon after followed by a special class of material termed Secco, and for which a limited company has been formed. As yet, the extreme simplicity in working of both of these films is not as well known to the public as it deserves. This, no doubt, is due to many causes, one of which being that many workers who use films are tied down by the form of their camera to some particular class of film that is especially required for same. That these modern strippers, will, however, continue to make headway with the general public is a certainty.

The treatment of Secco, for instance, is in reality quite as easy, in fact, easier, than the development of a glass plate, and, for the benefit of those readers who have as yet neither seen nor heard of the manipulations necessary, the following particulars may prove interesting.

The films are supplied in packages like bromide paper, and each packet contains twelve films and twelve strengtheners. The latter are laid aside when the packet is opened, and only the sensitive films retained in the dark enclosure. The sensitive film is placed in any dark slide, and exposed as easily as a glass plate. Any formula in development can be used, and, if exposure is about right, the image comes along beautifully, and fine density is secured, as well as a nice range of halftones, provided the lighting of the subject has been right. The film is then fixed in the usual form in hypo. In fact, up to this stage all the manipulations may be likened to the development of a bromide print on paper. After being well washed the negative is placed in a weak solution of glycerine and water for about one minute, and one of the strengtheners is also immersed in the solution at the same time. After a short immersion the negative is taken out and placed face upward on a

clean sheet of glass, a strengthening film is placed over the same, and both are squeegeed in contact.

In this condition the sensitive portion of the film is enclosed between two sheets of paper; it is, when still damp, pulled off the glass, and pinned up to dry in any suitable position. The drying does not take so long as with glass plates, by reason that the air has access to both sides of the negative, and when quite dry both papers will peel off the film with the utmost ease and certainty. Should intensification or reduction be required, either is as easily effected as with glass plates, and the tooth of the film is very suitable for retouching. For carbon work, where double transfer is shirked, these films are particularly well adapted; and they are just what is desired for the production of sky negatives, especially when exposed in conjunction with a black mirror. The emulsion is quite rapid enough for shutter exposures, and it is the writer's intention at an early date to make a few experiments in orthochromatizing these films for color work. In commercial photography they prove a great boon in many cases where glass plates would be of no avail, and when used in conjunction with one or other of the clever envelope contrivances, whereby only one dark slide is required, and this is capable of being filled and emptied in broad daylight, by reason of the opacity of the containing envelopers, they at once take a place in the first rank of up-to-date clever contrivances, getting rid of weight and the necessity of changing in the dark-room, when a fresh supply is required, for any number can be carried in envelopes in the breast-pocket.

That a return to stripping films should have taken place will, no doubt, surprise many, but the fact remains that a distinct advance has recently been made in them, adding to their practical value, and, if the manufacturers continue to supply them in the excellent form and quality as at present, the public will most certainly get accustomed to their use, and much of the existing prejudice be dispelled.—*British Journal of Photography.*

GENRE.

BY GEORGE CLARKSON.

It is very seldom that we see a genre picture that is *quite* satisfactory in every respect. Have you ever thought about it? If not, just do so next time you see some genre subjects in the convention exhibition. You will find that the photographer is first and the artist second. The photographer has got imbued with his posing and studio notions, and you feel that his figures are stiff, and that his accessories *are* accessories and not the real thing. To begin genre work there is one safe rule—simplicity. Don't be an overgrown amateur. When the amateur gets his first camera he loads it with a spool or with a dozen plates, and his one notion as he sets out for pictures is that the spool must be finished or the last plate exposed. We can excuse the beginner and pity him when he gets into the dark-room and finds that his stuff won't work; but the professional should know better than to want to turn out a picture at the first attempt. I believe that all who want to be really successful with genre work should commence out-of-doors. Occasionally we see a good interior piece, but blacksmiths or gossipers become very monotonous, and I fear that when we see even the best of them we are less interested in the picture than in how it was made. Our first thought is, "Yes, a clever flashlight; he handles his light well." More than forty years ago an Englishman, Robinson, commenced out-door pictures. He has been at it ever since, out-doors and in-doors. Long before flashlights or modern facilities, he practised combination printing with wonderful skill and patience. He would sometimes print from several negatives by careful washing; at other times he would cut fragments of film from his various negatives and blend them together so carefully on one glass that the picture printed without any sign of the faking. The simplest form of combination printing is the printing in of clouds, which everybody can do, but not always well.

Nowadays, when we see one of Robinson's interiors our first feeling is an almost enviable appreciation of the great skill which produces it; but when we see one

of his open-air pictures, with his dainty country maidens, the first feeling is one of simple pleasure.

I would, therefore, suggest as a very practical education in genre work that out-of-door subjects be tried. Do not go out with a special model, or with any fixed idea, but just go prospecting with the children or with a few friends. Go into the woods or the orchard or beside the water, and take a hint from whatever comes along. If the flowers tempt them, let them start picking them. If they are girls they will be every moment in graceful poses. Have a hand camera with you, and let them go ahead with their flowers. Give a quarter second exposure, and you will get all their naturalness.

Lots of practice of this kind will do good. The second ramble will yield results in which the mistakes of the first one are missing, and before long you will find you will have a picture which will give genuine pleasure even to people who do not know the models. Do not get the notion that the highest out-door work is easy of attainment. It is easier to get pleasing results out-of-doors for several reasons. The models are so much more tractable and natural. Let them pick flowers or bait a fish-hook and they do not assume that photographic pose which is the bane of a set scene in-doors. They palpitate with healthy enjoyment, instead of dismally attempting not to breathe or blink. And secondly, there is none of that artificiality of background or of accessory. And backgrounds and accessories are a real difficulty, even if the latter are genuine and not papier-maché.

When you have learned your lessons with the hand camera (and your models have at the same time fallen in with your ideas) you may take your larger stand camera with you and attempt to again obtain some of your happier results. This education in the open will prove of incalculable advantage when the in-door work is tackled. This in-door work will introduce quite distinct problems, taxing both skill and patience, but they will be surmountable if properly met.

PLATINOTYPE PAPER.

THERE is evidence that platinotype paper, though in very wide use at present, will ere long be more used than ever. This article is not for those who have for years been working the process, but is intended to give a few hints to those who for some reason or another have never taken up platinotype. There are two causes which are urged against platinotype; it is said to be uncertain and expensive. But its extra expense is very small (it does not amount to over twenty-five cents for a dozen cabinet prints), and the uncertainty is a mistake. Uncertainty usually means carelessness. With reasonable care—chiefly exercised in keeping the paper dry—failures are reduced to a minimum. One way of overcoming dampness is to frequently obtain fresh paper, and another is to keep the paper in special storage tins. These tins have a cavity in one end which is filled with absorbent calcium chloride, that is a special preparation which has a great affinity for moisture. The cavity is perforated so that the air in the tube can reach the chloride, and so have its moisture extracted. This affinity of moisture suggests that the chloride will take the first opportunity to render itself useless by becoming absolutely soaked and waterlogged, and it may be well on toward this condition when it is obtained. It should, therefore, be well dried from time to time. Better than to buy ready prepared absorbent is to make it. Purchase calcium chloride at the druggist's and mix it with water to make a saturated solution. Very little water will be required, for the chloride is exceedingly soluble. Into this strong solution mix common coarse asbestos until it makes a stiff dough. Knead it well with the fingers, and then break off into little cakes of a suitable size to go into the storage tin. Place them in a tin and bake for several hours in the oven, when they will become hard. Fill the tube and put the spare stock into a dry, wide-mouthed stoppered bottle. Rub the stopper well with paraffin wax; or if a stoppered bottle cannot be used seal the cork hermetically. Not only should the paper be kept in dry storage, it should also be kept dry during exposure and between exposure and printing. During

printing a piece of well-dried oiled cloth, or the rubber fabric obtainable commercially should be placed in the frame behind the print. Any failure to keep dry results in muddy tones and general loss of brilliancy.

It is said that platinotypes yellow with age. The paper itself does in the course of years assume a slight mellowness which rather enhances its beauty than otherwise, but the yellowness complained of is due to two causes. First, it is due to dampness in the paper during exposure, and this we have already dealt with. The second cause is the acid clearing bath. The print is immersed in a bath of hydrochloric acid to eliminate the iron. This bath is, too often, rushed, and the print taken out too soon. Another caution about the acid itself. Be sure to get pure, for the common commercial grade often contains iron, and so is less able to eliminate it from our prints.

Exposure is one of the bugbears of the careless worker. A platinotype print is, in this country, usually printed in the sun, and a few minutes less or more means under- or over-printing. In printing a number from one negative it is a useful plan to note one special bit, it may be a shadow under the eye, or an ear, but by noting that one point in every print it is easier to get an even lot than by taking a general look at the prints. There is much scope in printing, both for getting the best results, and also for avoiding failures. New paper gives harder prints than paper which has been stored some time. Prints from very weak negatives should be lightly printed and developed in cold developer (about 60° F.). After the final washing immerse them in an intensifying solution until they obtain a certain vigor. To make the intensifying solution dissolve 50 grains of sodium formate in 1 ounce of water. Also dissolve 10 grains of tetrachloride of platinum in 1 ounce of water. Sixteen drops of each of these solutions to 1 ounce of water gives the intensifier. Damp paper should be over-printed and put into a 5 per cent. solution of carbonate of potash to which a few drops of hypochlorite of soda are added. The prints will have a greasy, degraded appearance, but will much improve in the acid bath. Under-exposed prints which won't develop in a cold solution may be saved by removing to a hot solution—about 115° F. Over-exposed prints should be developed cold. Most of these modifications are at best a case of saving the print, and perfect results are only obtained with correct exposures.

There is a good deal of talk about warm-toned platinotypes, and some workers have gone further and obtained very pleasing local "flesh tints." This local toning is only really satisfactory in the hands of an expert, and so is outside the scope of this article. But warm sepia tones can be obtained by toning, or by using the special sepia paper. To obtain by toning mix a 10 per cent. solution of mercuric chloride, and add about 12 minims to the ounce of the developer used. An increase of mercury means a warmer tone. This developer should be used within two or three hours of being mixed with the mercury, and after use thrown away. Prints for sepia tones should be slightly over-printed, and should be rushed through the acid bath as quickly as is compatible with complete elimination of iron. That is, don't leave them to soak in the acid, but keep them moving.

The mounting of platinotypes often makes or mars a picture. The Rembrandt mounts have had, and still have, a wonderful run, and several new mounts, especially "Carbon Black," are altogether satisfactory. The fashion of running a narrow white margin all round a print is becoming commoner, and Hyatt's new trimmer meets this need. For a soft print inclining to flatness, a dark or black mount is often best; for a vigorous, contrasty print try a lighter mount. A platinotype is very liable to become dirty. If so, mix a paste of flour and cold water to a thick cream. Add to it a little common powdered alum, as much as can be heaped on a quarter, to a teacupful of paste. Mix quite free from any lumps, and with a very soft brush spread the paste carefully and plentifully over the print. After leaving it a moment wash off under a cold-water tap, and the paste will carry the dirt with it.

There remains the question of residues. These meant much to the photographer of twenty years ago, and little to the man of to-day. But while silver is coming down in price platinum holds its own, and the recovery of the metal from the developing bath (for the acid clearing bath is not

worth the bother) is worth attending to. The old baths are boiled in an enamelled or porcelain dish, and to them is added about one fourth their bulk of a saturated solution of ferrous sulphate. This precipitates the platinum in a heavy black powder, which may be collected and sent to the refinery.

LETTERS TO JACK—AND THINGS OLD AND NEW.

VI.

MY DEAR JACK: You ask me what I mean, exactly, by saying, in my last letter to you, "Don't try to be a wonder?"

Well, my dear fellow, I thought you would understand from the remarks made just before in the quotations concerning "modern art" from Mr. Sartain's *Reminiscences*. They were the words of a great artist who had many would-be imitators who did not imitate, and it is true that not only did painters a few years ago, who were earnest and serious workers, have to mourn over the incongruities that were produced with the brush, but the earnest and serious photographers of more than one era in our art have had cause to mourn over the productions of incompetent camera focussers who were seized with the ambition to climb all too rapidly up the ladder of fame, and who made all sorts of blunders in the attempt. These ambitious ones early became faithful attendants upon our conventions, and made bold to claim the best place for the exhibition of their productions. There was really something very funny about them, hard to understand. They were harmless in a way, and moved about among their fellows as guilelessly as does the Western cowboy under the shade of his sombrero and under the protection of the pistols at his belt; and yet they were a great nuisance. Our photographic "wonder," for as such I always regarded him, was clothed peculiarly to begin with, seeming to think that he had only to dress in a certain way, swagger with a certain swag and talk in a certain drawl, to make himself an object of public admiration. He wore a soft broad-brimmed felt hat, a low, wide collar, a large knotted necktie, and a velvet sack coat with great pockets in the sides. If he could, he cultivated long and curly hair and a dreamy look out of the eyes. Just think, Jack, I have seen him and talked with him in the very streets of Boston, and one of them lived there in the sixties. At the conventions he spent most of his time loitering near his exhibit, and tried to keep a knot of apparent admirers near him to whom he explained his "ideas of art," and upon whom he tried to make the impression that his "ideas" and results were the only correct ones. He was a sad, sad looking fellow, and really was to be pitied, for he was going into a decline. A good thing for our art that he didn't last long. He was a weary wonder and made a mistake in supposing that any manner of wear or gear could convert a penniless young man into an artist. He met ridicule on all sides and found only a few willing to walk with him. When I recall the memories I have of him and his fate I am reminded of the story of the toad and the centipede:

> "The centipede was happy quite,
> Until the toad one day, for fun,
> Said, 'Pray, which leg goes after which?'
> Which wrought his mind to such a pitch,
> He lay distracted in a ditch,
> Considering how to run."

There are some who will read this who can remember this "wonder" and who would not willingly tolerate him in their day. Do not try to be like him, but stick to the legitimate art methods.

I am glad to see that the good fellows who are preparing the feast for the Milwaukee convention are not going to overlook the importance of providing art instruction. I look forward with much interest for what will be presented, and have no doubt you will be on hand to share the freshness of the first utterances of the chosen instructors. There is great advantage in that. No one has shown more careful attention to the advantages of photographic advance than President Stein himself, and he bears high testimony to these advantages by his care to secure them for his convention guests. Now, I wonder if you understand me any better and if I may go on with my letter.

I always admired the man at our conventions who, having had the most years of practical experience, was willing to gather a knot of his younger craftsmen about him and answer their questions. But such men had no ambition to be leaders of style or opinion. If you do good work it is natural that others will want to follow you and that they will, but it is not your best business to induce them. In art there are men who have great repute, but who as individuals are not admired at all. Mr. McCarthy pictures one such in his *Reminiscences*, but he does not express much admiration for him, notwithstanding the fame of the artist alluded to, viz., the well-known Whistler. McCarthy calls Whistler "an American humorist and a Parisian gamin. Whistler was a school of art all to himself. He could not touch a canvas without creating an artistic controversy. He could work certain effects with his brush which no other seemed able to work as well, and could talk as well as paint, and for six words of criticism could give back a half-dozen harder unanswerable knocks." He was a wonder.

And do we not learn from all this, dear Jack, that men may sometimes become very disagreeable while they try to be altogether wonderful. I believe in a man having faith in himself, but I do not like to see too much self-conceit. I want to see you able to make most of the heads which come before your camera, but I don't want to see you "get the big head."

The good George Herbert once said, "Be not too presumptuously sure in any business; for things of this world depend upon such a train of unseen chances that if it were in man's hands to set the tables, yet is he not certain to win the game." And Emerson wrote: "The craft with which the world is made runs also into the mind and character of men. No man is quite sane; each has a vein of folly in his composition, a slight determination of blood to the head, to make sure of holding him hard to some one point which nature has taken to heart."

Well, Jack, convention times are upon us, and you may not get any letter next month

From truly yours,
EDWARD L. WILSON.

TELEPHOTOGRAPHY.*

BY THE REV. FRANK S. DOBBINS.

I AM somewhat surprised at my own audacity in replying favorably to the invitation of your committee to address you this evening. An amateur who, up to eighteen months ago, had not touched plate or developer, and who has only odd moments to devote to the fascinations of photography, and who is, therefore, only a tyro in things photographic, should hardly speak to you who are so experienced and so wise. However, it is with the thought that perhaps you have not experimented in this single direction that I venture to speak to you on telephotography and to bring to you some of the rude and crude results of my own experiments and observations.

I shall not at this time speak concerning the advantages of telephotography in detail. Suffice it to say that with the telephoto attachment one can photograph rather more of detail than the eye can see, and on about the same scale as the eye views things. All of the advantages of long focus lenses are apparent in telephotography. The telephoto attachment gives to its owner the equivalent of a whole battery of lenses, running from say 21 inches to 56 inches in focal length.

As to the apparatus. I use a Bausch and Lomb Zeiss Convertible Anastigmatic lens, made up of an 11½- and a 14-inch lens, the combination having a focal length of 7 inches. With this is a telephoto attachment having set in it a negative lens of 3½ inches focal length. The Bausch & Lomb Company adjusted the lenses and the attachment mechanically and optically. I use either one of two cameras, a Premo Long Focus Reversible Back Camera for a 6½ x 8½-inch plate, having a bellows length of 29 inches, or a Long Focus Montauk for a 4 x 5-inch plate with a bellows length of 19½ inches, to which may be

* A paper read before the Photographic Society of Philadelphia, and reported in its *Journal*, April, 1900.

fixed a little box giving an added bellows length of 5 inches. As rigidity is absolutely necessary I attach a rod, with a slot in it of 3½ inches (to allow of all needed changes for variations of enlargements), running from the top of the lens-board front to the top of the camera box, held in place by set screws. If I use the larger camera I slip a block or a bit of wood under the attachment.

There is a very simple rule for finding the approximate length of bellows required by the telephoto attachment. The negative lens is usually one-half the focal length of the positives. Multiply the focal length of the negative lens by one less than the number of magnifications desired, and the result is the bellows length required approximately. Thus seven times 3½ inches gives 24½ inches bellows length needed with positives of 7 inches and a negative of 3½ inches for an eightfold magnification. On the baseboard of my camera I have marked off the points to indicate the varying bellows length required for the different magnifications, eightfold, sevenfold, etc. "Magnification" means *linear* magnification, so many diameters greater than the original image made with the positives of the combination only.

As to the comparative size of the telephoto arrangement and a camera with positives only, Dallmeyer's rule, confirmed by calculations made for me by the Bausch & Lomb Company, show this rather remarkable state of things. This little box of mine, with this tiny telephoto attachment (the attachments cost from $16 to $24), gives precisely the same results, for an eightfold magnification, that would be accomplished had I a camera 56 inches in bellows length, with a pair of lenses 9 inches in diameter, mounted in a barrel (or keg, literally) 12 inches long. The rule to find the equivalent of any magnification is simply to multiply the focal length of the positives of the combination by the number of magnifications: thus, eight times 7 gives 56. If I make simply a sixfold magnification with a bellows length of about 17 inches, it is the equivalent of an ordinary lens of 42 inches focal length.

I may remark, in passing, that I have hitherto yielded to the desire to see what the telephoto lens will do, and so have almost always strained the lens to its utmost. This is like a novice, but unwise. One ought to be content with a sixfold magnification, for the results are better in every way, and the exposure is so much lessened. I shall mend my ways in this respect. Some of the illustrations I bring you this evening would have been much better had I but had the good sense to exercise some restraint in this direction before. Moreover, nine times out of ten the 4 x 5 plate is preferable to a large one, for certain reasons.

I put my 4 x 5 camera, the box addition, the telephoto attachment, the shutter, lenses, focusing cloth, focusing glass, six double holders with a dozen plates, all into a case. The whole measures 18 x 8 x 7 inches and weighs just 13½ pounds. So it is not bulky or weighty. I use a good, substantial tripod. When possible I get behind a tree or a building, out of the breeze; the wind's vibrations must be guarded against. In setting the camera I rack out the bellows to the point of the magnification desired, and then focus with the telephoto adjusting screw.

I use isochromatic plates almost altogether. I notice that Dallmeyer, Spitta, Marriage and others who have written on telephoto work all use isochromatic plates. A color-screen is almost necessary for distance work, to cut out haze, and the consequent exposure is so very much less with the isochromatic plates than with others that one finds after a little that he must depend on these almost always.

As to exposure. This is the one great problem which plagued me. I have worked away at it and with some results which I give to you in printed form. Let me say that the tables are tentative merely. I expect with larger experience to revise them. Yet they represent the results of my experimenting up to this time. The rule usually given is that the exposure should be the normal exposure with the ordinary lens multiplied by the square of the magnification

I have found this to be the maximum exposure.

SUGGESTED TABLES OF RATIOS OF EXPOSURES:

For use with Telephoto Combination (positive and negative lenses). Multiply the normal exposure with ordinary photographic lens for an object in the shadow by the figures given. (Usually one determines the normal exposure with a Wynne Exposure Meter by holding it in the shadow of the body.)

I. For objects 1000 feet distant or less, using no color-screen:

Magnification	8	7	6	5
Dark objects in shadow	64	49	36	25
Dark objects in good light / Bright objects in shadow	48	36	27	18
Bright objects in good light	32	24	18	12
Bright objects in intense light	16	12	10	8

II. For objects more than 1000 feet distant, using a color-screen and isochromatic plates (if no screen is used, the exposure will be, of course, but one-fourth the length of time when the screen is used):

Magnification	8	7	6	5
Dark objects in shadow	64	49	36	25
Dark objects in good light / Bright objects in shadow	50	38	28	20
Bright objects in good light	36	28	21	15
Bright objects in intense light	22	18	14	10

The variations are not so great as they seem, being equal to that from one second to three-fourths of a second, to one-half of a second, or to one-quarter of a second.

As to the development of plates exposed in connection with the telephoto attachment, I notice that it must be carried much further than with ordinary exposures. I notice, also, that the development proceeds much more slowly. I do not know the reason of this.

Now, let me give you, with no end of apologies for the lack of photographic finish in them, a few illustrations of telephotographs. [Then followed illustrations of the camera with telephoto attachment, and of the inner construction of the attachment. Reproductions of certain of Dallmeyer's illustrations, also of Boisonnas' view of Mont Blanc from Geneva, forty-four miles off. After that came original telephotographs of the City Hall from Belmont, three and one-half miles away, and from other view-points. Bryn Mawr College, the capitol at Washington from the summit of the Washington Monument, details of the City Hall tower from points a thousand feet away, and others of that kind. The Grant monument in Fairmount Park, showing the exaggerated perspective when an ordinary lens is used, the difference with the telephoto lens, also the limitations of the attachment when used with a magnification of fourfold or under in a dark disk around the figure. A specimen of the architectural application of the telephoto lens was shown in the capital of one of the columns of Girard College, together with the entablature above it. In many of the illustrations on the same slide were presented both the telephotograph and one made with the ordinary lens, for the sake of comparison and contrast. Finally the application of telephotography to portrait work was illustrated.]

LOCAL REDUCTION.

VERY many negatives of both interior and exterior subjects are thrown away on account of halation, and very many more are used which would look much improved if the halation could be reduced. In interior work the halation is usually very apparent, around some window or light; or it may be around some very white object, such as a bundle of papers on a dark table. Out-of-doors it is not always so much in evidence. It may be from the sky showing around the finer branches of trees, and if so it may often be got rid of by trimming the picture, or it may just be in the form of an additional density around some light but beautiful part of the scene. In this case the negative is voted a little dense, and with a sigh for lost detail we go ahead with the printing. Many a picture may be wonderfully improved by a little local reduction, and in many cases the most satisfactory—as it is the simplest—method of reduction is by rubbing down with alcohol. I do not think that there is any real chemical change in this operation; it is just a mechanical rubbing away of the silver, and the alcohol toughens the film and prevents rupture. Cut three or four pieces of blotting paper to make a bed for the negative, and lay it on this paper, on a flat table. This is just enough to give it a firm, even backing. Don't be too afraid of your negative and give it too soft a bed, or it may smash when you come to put on pressure in the rubbing. Take a piece of clean chamois leather and draw it tightly over a finger tip. Moisten it with alcohol and rub gently, round and round, on the dense spot. Less than a minute of rubbing will be sufficient to reduce a slight density, and care must be used not to overdo it. A wonderful amount of detail

can be brought out in this way from patches so dense that nothing can be seen in them before rubbing, and as already said the result is often a most wonderful improvement. The action seems to be very automatic in its results, and different degrees of density are proportionately reduced.

Thus there is but little fear of unevenness if ordinary care be used. Let the pressure be slightly heavier in the centre of the densest part, and by decreasing it toward the edges, and rubbing with a circular motion, the faked and unfaked parts of the negative will merge without any visible marks.

The other commonly followed method is Howard Farmer's. It is made, as a stock solution, by taking saturated solution of potassium ferridcyanide 1 part, hypo (solution 1 in 5) 10 parts. Here we have to take precautions against marks on the plate, and this is done by soaking the negative in water and afterward in glycerine. When the negative is well water-soaked let it drain for three or four minutes, and then blot carefully with "Royal" blotting paper. Then soak it in a mixture (one in five) of glycerine in water for about a minute and again blot off. The intention of all this preparation is to make the reducer flow so that there can be no marks showing on the reduced negative, as would be the case if it were worked on when dry. Apply the reducer with a brush as though it were water-color. If only slight reduction is required in some spot dilute the reducer. In working this method the negative may—unless it is a large one—be held in one hand. Reduction is rapid and can be watched as the brush strokes are laid on. Have a few bits of clean blotting paper ready, and as any part is sufficiently reduced blot off the reducer. Use a fresh piece of paper each time. This method is perhaps the best where large patches, such as skies, are to be reduced. In skies unsuspected clouds may be brought to light. The alcohol method is best in reducing local halation. A plate alcohol reduced requires no after treatment. For a plate reduced with potassium ferridcyanide a short fixing in hypo and a good washing afterward will suffice.

F. P. HAMMOND.

EAST ORANGE, N. J.

RAILROAD RATES TO THE CONVENTION.

[THE following communication comes to hand just as we go to press.—ED. W. P. M.]

"A rate of one and one-third fare certificate plan has been secured for the convention. Be sure to ask the railroad agent for a certificate when you buy your ticket. You pay full fare going; the certificate, when signed by the special railroad agent (who comes to the convention hall for that purpose), will entitle you to return ticket at one-third fare.

"These certificates must be left with Treasurer George R. Barrows when you enter the Exposition Building. Failure to bring your certificate or the neglect to leave it with the Treasurer will prevent you from obtaining the reduction of fare on the return trip. All certificates must be in the Treasurer's hands on or before Wednesday, the 25th of July.

"The following from the office of the Western Passenger Association may be of help in purchasing tickets:

"'Under our rules certificates will be honored which show the purchase of going tickets not earlier than three days prior to the date announced as the opening date of the meeting and during the first three days thereof, and if presented for return tickets not later than three days after the date announced as the closing date of the meeting (Sunday not to be accounted as a day in any case).'

"No city in the country can entertain visitors better than Milwaukee. The Association has never had a President who has worked harder for the success of the meeting than has President Stein.

"You may rest assured that your instruction, your entertainment and your comfort have been well provided for. Come to Milwaukee and see the best convention and the largest attendance the P. A. of A. has ever had. In another column will be found a table of railroad rates from different sections of the country.

"GEO. B. SPERRY,
"First Vice-President P. A. of A."

Excursion rates to Milwaukee and return by rail. These rates are based on the certificate plan of one and one-third fare. Do not fail to ask for certificate when purchasing tickets.

Peoria, Ill.	$ 9 10
Indianapolis, Ind.	10 10
Toledo, Ohio	12 75
Toledo, Ohio, by rail and boat	9 85
St. Paul, Minn.	13 00
St. Louis, Mo.	13 40
Detroit, Mich.	13 75
Detroit, Mich., by rail and boat	9 70
Louisville, Ky.	14 10
Cincinnati, Ohio	14 10
Des Moines, Iowa	14 80
Pittsburg, Pa.	19 40
Toronto, Can.	20 00
Kansas City, Mo., via Chicago	19 50
Buffalo, N. Y.	21 40
Topeka, Kan., via Chicago	22 15
Lincoln, Neb.	22 60
Nashville, Tenn.	26 10
Washington, D. C.	26 75
Little Rock, Ark., via Chicago	27 20
Philadelphia, Pa.	27 75
New York, N. Y.	30 10
Boston, Mass.	33 10
New Orleans, La.	34 10
Dallas, Texas	39 35
Denver, Col., via Chicago	42 15

Mr. J. Geo. Nussbaumer, Buffalo, Secretary of the P. A. of A., has arranged for a special train to the convention from Buffalo to Milwaukee. Eastern photographers desiring to join the party travelling in this special train should write to Mr. Nussbaumer without delay.

GLASS FOR THE STUDIO.

SOME years ago a Massachusetts insurance company made a number of careful experiments to discover what glass would best diffuse light. Their object was not suggested by the studio—but rather by the large factory. They experimented with almost every kind of glass, and concluded that the best results were derived from simple ribbed glass in true curves, and having twenty-one ribs to the inch. This placing of ribbed glass in preference to plain clear glass was received with much skepticism, and Mr. C. L. Norton more recently investigated the subject in a more thorough manner. We believe Mr. Norton was himself one of the skeptics, but his experiments were almost startling in their results. He showed that in a room twenty-five feet deep, ribbed glass instead of plain, increased the intensity of the light threefold on the rear wall of the room, and almost equally on the side walls and ceiling. This was compensated by a loss of light nearer the window and on the floor. Mr. Norton, in explaining this, says: "The light entering through a window comes for the most part from the sky, and has, therefore, a general downward direction, varying with the time and position. Hence, the position of the room which receives the most light ordinarily is the floor near the window; but, if we interpose in this downward beam of light a dispersive glass, the light no longer falls to the floor, but is spread out in a broad, divergent beam, falling with nearly equal intensity on walls, ceiling, and floor. We must bear in mind that we gain nothing in the total amount of light entering the room, but we have simply redistributed the light, taking up from the floor that which fell there and was comparatively useless, and sending it in directions where it is of more service. The result of the examination of the various glasses was to show that a finely ribbed or corrugated glass was better than the others, as it gives the widest and most uniform distribution. There is no apparent gain in corrugating both sides. Ground glass is barred out, because of its actual loss of transparency, caused by slight amounts of moisture or dust. The ribbed glass, three-sixteenths of an inch thick, with twenty-one ribs to the inch, known now as 'factory ribbed glass,' is the best dispersive glass upon the market. When a glass of slightly better appearance is desired, that which is known to the trade as 'maze' glass is the best. It is similar to the fine ribbed glass, except that the ribs are not straight, but are bent into irregular figures."

Careful measurements were made by taking two rooms, one above the other, alike in exposure, shape, and size, and comparing the intensity of light falling on similar portions of the two when one was glazed with plain glass and the other with the glass under examination. Broadly speaking, it was found that the centre of the room was as bright when lighted by a window of one square foot of ribbed

glass as with a window of three square feet of plain glass. This was true in all lights, from a bright sunshine to a heavy thunderstorm, and with the windows facing in any direction.

The value of this information is obvious to the photographer who cannot get away from the cruel intensity of his light, and equally so to the one who laments his dark corners.

THE WASHING OF PRINTS.

THE necessity of clearing hypo from prints after fixing is one of the truisms of photography. There has been one standard rule for many years, and that rule is "plenty of washing." The conscientious photographer will leave his prints in running water for hours, to insure elimination of the hypo. It was only with the last few years that this question of washing received thorough investigation at the hands of Messrs. Haddon and Grundy. The result of their researches was interesting as showing that washing was better done fifty years ago than to-day. The usual mode of washing paper negatives was to place them between clean blotters immediately on removal from the hypo bath. The negative was then washed for about three minutes and again carefully blotted off. This alternate washing and fixing was done several times, with the result that the negatives are as perfect to-day as when they were taken.

So far from long washing being advisable, it may almost be termed injurious. To leave a print soaking for several hours, or even all night, seems to lessen its chance of permanency, and it certainly renders it flatter and less brilliant. With proper care, a wash of an hour should be more effectual than a longer one. A little consideration of what actually takes place in the fixing of a silver print will help to explain this. First, we are only half-right in supposing that the injury which follows careless washing is due to hypo. It is due, not to hyposulphite of soda, as is commonly understood, but to a combination of the hyposulphite of soda with the silver.

A print which has been properly washed, and is quite clear from hypo and from unaltered chloride of silver, may be soaked in a weak solution of hypo and then dried without further washing, and will stand for years without change. The cause of the trouble, therefore, is not hypo, pure and simple. What really takes place in the fixing bath is a twofold action. First, the hyposulphite of soda combines with the unaltered chloride of silver. Before hypo combines with this salt and at a certain stage of the taking up of hypo the salt is insoluble. But if a sufficient excess of hypo is taken up the salt becomes readily soluble. From this it will be seen that before our paper is properly fixed it reaches a stage in which the silver has combined with the hypo, but only to form an insoluble compound, which will not be gotten rid of by any reasonable amount of soaking, though it may be in part removed by a very vigorous and very prolonged washing. The safeguards are twofold. To have the hypo bath of sufficient strength, and to allow a reasonable amount of time for complete fixing. Messrs. Haddon and Grundy, as a result of their experiments, decide that a 20 per cent. solution of hypo and an immersion for fifteen minutes were sufficient.

It will be evident that the crucial point is in the fixing, rather than in the subsequent washing. Where large batches of prints are fixed in small lots of solution the result is not as likely to be satisfactory as when half a dozen prints are carefully handled in a quart of freshly mixed fixing bath. Similarly where the fixing bath is used repeatedly, there is some tendency to weakening, with the result that there is a greater proportion of insoluble silver salts, and that a prolonged washing will be required.

Given a hypo bath of sufficient strength, an immersion of fifteen or twenty minutes, and a conscientious washing in running water, or in frequent changes, for an hour, and the result should be a permanent print, and one with the maximum brilliancy. To partially fix a print is to render it difficult to wash, and it can only be rendered moderately permanent by such rough and prolonged treatment as is calculated to damage its beauty.

CLOUDS.

BY ROBERT MELVILLE.

THERE seems to be a law—perhaps a law of retribution—that if we offend in one direction our reformation carries us beyond the reasonable point and leads us to error in the opposite direction. It must be something of this kind which has led to some of those pictures which are termed cloud studies. The photographer who used to be responsible for bald-headed landscapes found the adding of clouds such an advantage—and perhaps such a task—that he determined to have plenty, and so overdid it. There are comparatively few sea- or landscapes which would not be improved by the addition of clouds. Clear skies, as a part of the whole scheme of color in our landscapes, are very inadequately rendered by the white or gray of our monotone print. It is seldom that sky and landscape can be got on the same plate, though it may sometimes be done by careful exposure, followed by careful development and perhaps local reduction afterward. Clouds do not always harmonize, *pictorially*, with the landscape over which they appear, after being translated into monotint. Those which usually do, and which are the most easily obtained, are heavy thunder clouds, or heavy sunset clouds banked on the horizon. The reason of this is, perhaps, that we are there after a cloud picture, pure and simple, and the foreground being dark and under-exposed adds to our "effect." In other cases, even if we do get the clouds, they are scarcely visible in the print when the foreground is sufficiently printed, and the best all-round way is double printing.

First, however, as to obtaining all on one plate. It can sometimes be done by use of an old-fashioned roller blind shutter. A few years ago we had to listen to many discussions about shutters, and the chief points around which argument centred was the one of the difference of exposure which each part of the subject received. The roller blind, on being released, runs upward in front of the lens and down again, so that the lower part of the lens is open to the light throughout the exposure, and the upper part only while the shutter remains at the top before returning downward. By carefully regulating the tension of the shutter, it is sometimes possible to get satisfactory single negatives in this manner.

Much may be done, with some exposures, in development. Use a pyro developer with a fair amount of restrainer, and develop until the high-lights are visible, but not too dense. I always hold the dish in my hand during this development, and keep it moving in such a way that the developer covers the foreground all of the time and is flowing on and off the sky most of the time. As soon as the high-lights are clearly shown, remove to a metol developer. I obtained this formula some time ago from one of the English or German magazines, and find that it does what was then claimed for it—*i. e.*, bring out the details to a printing density without hopelessly ruining the sky. No. 1.—Metol, 50 grains; sodium sulphite, 1 ounce; water, 9 ounces. No. 2.—Potassium carbonate, 3 drachms; sodium carbonate, 4 drachms; potassium bromide, 20 grains; water, 9 ounces. Use equal parts of each.

But very often a special negative is the only method of a successful cloud picture. There is much carelessness in the making and using of cloud negatives. Perhaps the commonest, certainly the most quoted, fault is to use one, or a few, stock negatives for all subjects. This need only be mentioned to show its mistake. There is an occasional practice of tilting the camera upward against the sky. The advantage of this is that some very pretty clouds are obtained; the disadvantage that they are untrue to nature. "What are the odds," it may be asked, "if things are 'untrue to nature?'" I am not out against any abstract morality, but I protest simply because clouds not true reveal themselves to anyone who knows about clouds, just as a terrible example of foreshortening in a human figure will reveal itself to anyone knowing about the figure. Another mistake is to introduce false lighting in clouds. We all smile when we see a professional portrait in which the figure and the background are lighted from opposite direc-

tions, but the case is worse when introduced into a supposedly natural scene. I am rather inclined to advocate confining a successful cloud negative to one picture. If a picture is produced that is any credit to the producer, let that be sufficient glory; do not let him want to make further use of half of it.

To take clouds as such, the best time is all the time. In working in bright sunlight, the smaller the stop—down to $f/64$ or in extreme cases $f/96$—the better; for heavy dark clouds, $f/32$ or larger. I always prefer a hand camera for this class of work, from which it may be inferred that I work in small sizes. I like the hand camera because I never give more than one-quarter second exposure on clouds, and I can hold the camera steady for that length of time. All plates should be backed, and for heavy clouds I invariably use plates of only medium rapidity, and no color screen. The use of a color screen is much misunderstood. I use it on light, feathery clouds, in conjunction with an orthochromatic plate. Choose a pale-yellow screen, one that increases the exposure about three times only, or the ortho part may be overdone and thunder sky the result. In morning or evening work there is often much redness in the sky, and an orthochromatic plate should be used without the screen. There is an almost irresistible tendency to let the judgment be warped by the color beauty of clouds. If you cannot judge the relative values and the composition of the sky before you without being misled by color, then carry a piece of tinted glass—green, or blue, or smoke.

Over-exposure will ruin the delicacy of the clouds; under-exposure is a yet worse evil. Develop for softness and delicacy, and don't overdevelop. Above all, obtain a clean, quick printing negative. A stained or dense negative is such an affliction that the unfortunate possessor should get rid of it and try again.

PHOTOGRAPHY IN WARM CLIMATES.

SINCE our Spanish war many photographers have visited Cuba or the Philippines, and the tendency seems to point to more work being done in warm latitudes. The following hints, contributed to the London *Camera Club Journal*, by Mr. F. O. Newmann may prove useful:

Every dozen of plates should be packed "in a soldered tin." The plates should be backed. Leather should be avoided, as the dampness spoils it, insects and other creatures eat it. The camera should contain only polished wood and brasswork or metal; the latter must be kept well greased with oil or vaseline.

Avoid india-rubber, it gets "tired" and useless very quickly. No printing paper will stand the climate, so take chemicals and make your own—ferro-prussiate paper for preference. Pack all outfit in a black tin trunk with an overlapping, well-fitting lid, and secure it with a chain and letter-lock in addition to the ordinary lock. Take plenty of permanganate of potassium. Provide yourself with porcelain trays; glass breaks too easily, and others will warp and split at the edges.

"*Exposures.* I found that the shortest possible exposures between mid-day and 2 P.M. gave excellent results. Until 10 A.M., and often later, the exhalation of humidity from the soil, caused by the nightly rains, will render photographic attempts more or less precarious.

"*Developing.* This can only be done at night, and in a part of the house opposite to the one on which the moon is shining. Solutions must be made fresh each day. It is troublesome to make them at night on account of the insects which are attracted by the light, and which come around you in hundreds; it is, therefore, advisable to make them by day, and at night to place the trays on a few lumps of ice, or place the bottles of solutions in a basin containing the ice; the latter must not on any account be put into the solutions. See that there is a good current of air coming into the room, as it prevents frilling. A good plan is to stand the ruby lamp inside a lantern. I always place water in the bottom of the ruby lamp.

"*Printing.* Wash your trunk above alluded to well inside and out with a solution of permanganate of potassium, make your ferro-prussiate paper, place it inside the box to dry, and cover the whole with a couple of rugs or blankets. Cut up the

paper at night and place it between the leaves of a book ready for use in the morning. The paper prints quickly enough on the equator.

"*Negatives.* Clean out the boxes in which they come, and see that there are no traces of insects' eggs. Place a little camphor in muslin at the bottom, replace the negatives, paste all over with cloth or paper, and saturate this covering with strong arsenic solution.

"There are three things one must always encounter and guard against in the tropics, viz.:

"1. Excessive dampness.

"2. Excessive light and absence of light-tight buildings; and

"3. Insects.

"The dampness pervades everything, and combined with heat and light makes a formidable enemy.

"No one who has not been to the tropics has any idea of the number and variety of insects which are to be met with in this world of ours, nor of their propensity to get into the tightest corners, there to propagate their species, which in turn will devour films, etc.

"Take some black paint and paint the inside of your camera every month."

ARTIFICIAL REFLECTIONS.

ONE of the greatest hits that I ever knew made by a photographer was by one who made a specialty of "seaside" pictures of children. Not those little nudities so dear to the hearts of fond mammas, where a plump three-year old rolls on the sand, or gazes out across a background of seagulls and tossing foam. In these pictures the children had their little dresses tucked well up, showing a generous length of bare limb, and armed with pails and wooden spades they digged in the sand. The sand and the pools of water which were used looked so like the real thing that it was usually supposed by people seeing the pictures that the studio held both water and sand. The sand was made of the flocks from an old mattress, and the water was a sheet of heavy patent plate glass, over a box about ten inches deep and lined with gray paper. This gave a more natural reflection than did a mirror.

The hint then received proved useful to me, and I afterward learned that Mr. T. N. Armstrong had conceived the same idea of utilizing this more moderate reflection. In a paper of his some time ago he describes his difficulties in endeavoring to photograph a natural history specimen which had to overhang a pool of water. After discarding a mirror as unsatisfactory, and having learned that a mirror of real water left much to be desired, he struck the glass and box idea. He says:

"My attempts, however, had shown me that what was wanted was 'a mirror that was transparent, as well as being capable of producing a reflection of the object,' and hence I brought into requisition a large sheet of patent plate glass. This I supported on a deep box, the bottom and sides of which were lined with rough, brown paper. The moment the nest was placed over this I saw I had solved the problem, and all that was needed then was merely the placing of the glass and object in the most suitable position in relation to the source of light. This I eventually found required the shutting off of all light behind the object; and, after several attempts at different open windows, it was found an oriel window that permitted light being thrown from exactly in front, as well as somewhat from each side, yielded the best results."

It might be supposed that in using such a thick support as patent plate glass for this purpose there would be a difficulty to overcome the liability of such to yield a double image reflection arising from the two surfaces of the glass plate. In practice, however, such does not exist; provided the stand-point of the lens is brought to bear upon the object from the exact position, no double reflection will be apparent, and a result obtained, when the picture is trimmed down of its surroundings, that is impossible to detect that such was not obtained from a truly natural source.

The employment of artificial reflection opens up a very wide field of interest to those workers who desire to produce particular effects; but little consideration will be needed for anyone to understand that

quite a large number of subjects of small dimensions are capable of being made to assume a more natural appearance by the employment of such or similar means than by merely photographing the same straightaway, without having any regard to the natural surroundings of such or the position they occupy in nature.

This idea to some extent we find carried out by bird-stuffers, not only in the preservation of their specimens, but likewise in their attempts to cause their subjects to appear in as natural positions, or with as natural surroundings, as is possible of attainment, and very striking effects are capable of being produced with the aid of a large sheet of glass when placed in suitable situations in relation to the source of light that is employed to photograph the particular object with.

EDITOR'S TABLE.

THE BLAIR CAMERA CO., of Rochester, N. Y., sends us its new 1900 catalogue, a dainty booklet in red and white covers, describing all the various styles of *Hawkeyes* for films and plates in the many different sizes. The new *Hawkeye* models are fitted for the use of Daylight Loading films, and have other conveniences not found in other hand-cameras. Photographers going to the convention should secure a *Hawkeye* before they leave home, and thus be enabled to bring home their own personal souvenirs of the convention and things seen in Milwaukee.

MR. J. B. SCHRIEVER, formerly of Emporium, Pa., recently opened a new studio at 110 Wyoming Ave., Scranton, with a fine exhibition of photographic work and other special features. The studio during the first few days was thrown open to the public, and music was provided. Invitations to visit the gallery were sent out in the form of a legal summons, and the announcement of the opening was done in a very tasteful way.

Mr. SCHRIEVER has made good progress in his profession during these past few years, and our best wishes go with him in the new location. Scranton has now three photographers of the first class, and they are all subscribers to this MAGAZINE, so that we may look for keen rivalry for first place ere many moons.

MESSRS. ROSS & CO., LTD., 111 New Bond St., London, W., send us their new 1900 catalogue of lenses, including the *Symmetric Anastigmats*. These combine the advantages of the anastigmats with a reasonable price, and are well worth looking after. A copy of the catalogue may be had on application to ROSS, LTD., at the address given.

PACIFIC COAST photographers will learn with regret that Mr. J. PITCHER SPOONER, of Stockton, Cal., has been obliged to retire from active business on account of ill health. Mr. E. J. MCCULLAGH, of the same city, has succeeded to Mr. SPOONER'S business, and will continue his own with Mr. SPOONER'S studio in the Yosemite Theatre Building, where Mr. SPOONER has been located for a number of years.

Mr. MCCULLAGH is a young photographer who has given evidence of considerable ability during the past few years, and we sincerely wish him every success in his growth.

The Way We See It is the title of an unusually attractive sample book just issued by JAMES L. DILLON, commercial photographer, 1017 Chestnut St., Philadelphia. The book shows six pages of small-size reproductions from pictures recently made by Mr. DILLON. The reproductions, which are actual photographs on print-out paper, offer conclusive proof that Mr. DILLON is a skilful worker and master in many branches of work. It is a long time since we saw such an admirable showing of commercial photography, and we trust the little booklet will repay the labor given to its making.

MESSRS. BURKE & JAMES, 111 Wabash Ave., Chicago, have just published a new edition of their general catalogue. It lists and illustrates the *Ideal* specialties, and should be carefully looked through by the progressive worker. Among Messrs. BURKE & JAMES' specialties the *Ideal Photo-optical Outfit* is one which should prove very popular as well as useful among professional photographers. A few particulars concerning its advantages may be seen in our advertising pages.

MR. PETER DILLER'S pictorial announcement among our advertisement pages should not be overlooked. It presents one of the many profitable uses

of the Klay Multiplying Plate-holder, and shows how it may be made to yield a very attractive side line. The Klay holder is decidedly the best thing of its kind in the market, and we hear with pleasure that it is selling as quickly as it is made known to the fraternity.

The photographer possessing a Klay holder has a sure moneymaker, and we would like to see it in every studio in the land. Write to Mr. DILLER for a copy of his pamphlet.

IN a recent letter from the VOIGTLAENDER & SON OPTICAL CO., of New York, we learn that this firm is now making a specialty of fitting their high grade *Collinear* lenses to many of the various styles of hand cameras. The Collinear, Series II., is constructed so as to be easily adaptable to most of the Cycle and Long Focus as well as the Kodak varieties, and when so equipped these cameras are vastly more useful than in their original condition.

MR. R. J. GOLSEN, 82 Wabash Ave., Chicago, having at last completed the equipment of his new store, has celebrated the event by issuing a *Bargain List* (No. 13), "bigger and better than ever." It is a wonderful list, and must be seen to be appreciated. A copy of the list and another special background catalogue may be obtained on request from Mr. GOLSEN by mentioning this MAGAZINE.

As we go to press we learn that Messrs. E. & H. T. ANTHONY & CO. have suffered considerable loss by a fire at their new establishment, 122–124 Fifth Ave., New York. This misfortune, coming just after the furnishing of the new salesrooms with new goods of the most desirable description, is, to say the least, exasperating. The refitting of the store is being rapidly pushed forward, and a few days will find things as they were before the fire.

WE have received from Mr. G. GENNERT, 24 East 13th St., New York, advance copies of his new general catalogue for 1900. It is a bulky but attractive volume, and will prove useful as a general reference book of information concerning standard photographic apparatus and supplies. The list includes all the imported specialties for which Mr GENNERT has the sole American agency, and many novelties which will be found helpful in the photographer's work-rooms and skylight.

Mr. GENNERT calls our attention to the interesting fact that Ortol tubes, already well and favorably known as offering an excellent developer for negatives, are also remarkably effective for developing Velox and other gaslight papers. These tubes (costing 35 cents) ordinarily furnish forty ounces of developer for negative making, but for the development of Velox paper, etc., should be diluted to make 240 ounces of developer. Used in this way Ortol tubes produce a developer yielding pure blacks and whites, with rich tone gradation throughout the print. Their economy will be evident.

The *Montauk List* for 1900, just published by Mr. GENNERT, is exceedingly attractive in contents as well as appearances. Those on the lookout for a hand-camera to use during the summer should not fail to see this list.

THE Chicago Society of Amateur Photographers announces a Photographic Trades Exhibit, to be held at Chicago, August 27th to September 1st inclusive. Full information can be had from the Society, addressed in care of the Art Institute, Chicago. The project well deserves the support of the profession and the trade, and we urge our readers to participate in the advantages it offers in the way of desirable publicity.

THE APPERT GLASS CO., 135 Broadway, New York, send to our table a serviceable glass fixing and washing tank for negative making. This is constructed of a special toughened glass for hard usage, and is devised to hold a large number of plates of different sizes. We have used the tank in our laboratory work since its arrival with considerable satisfaction, and can recommend it to both professional and amateur workers as a useful and convenient dark-room help.

A booklet describing this tank, and the applications of Appert glass generally, may be had on application to the company at the above address.

PHOTOGRAPHIC INSTRUCTION TEXT is the title of a handsome volume of 237 pages, by GEORGE H. PALTRIDGE, Instructor in Photography at the Lewis Institute, Chicago, and published by the PHOTO TEXT PRESS, Chicago, at $1.

The book comprises a complete system of instruction in photography, and is the outcome of the author's lectures and experience with his classes at the Lewis Institute. It is eminently adapted to course work, general reading, and reference purposes, and its practical information is made easily accessible by means of marginal sub-headings and a good index. We can cordially recommend it as a capital first book for those desiring a systematic course of instruction in photographic theory and practice.

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AUGUST, 1900.

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THE NATIONAL CONVENTION—OFFICIAL REPORT 337
VIEWS ABROAD AND ACROSS 353
IN NATURAL COLORS. By James F. Ryder 358
PHOTOGRAPHING PAINTINGS 360
THE PICTORIAL EXHIBIT AT MILWAUKEE 368
WORKS OF ART: HOW TO SEE AND ENJOY THEM 371
WHAT THE JUDGES THOUGHT OF THE EXHIBITION 374
THE OHIO-MICHIGAN CONVENTION 375
SITTERS AND THE PART THEY PLAY IN PHOTOGRAPHY 375
WASTE. By Wilbur Grubeman 378
DOES BACKING SLOW THE PLATE? By W. E. Debenham 379
COPYING. By Frederick A. Allison 380
COLORED TRANSPARENCIES BY ABSORPTION. By R. Defays 382
EDITOR'S TABLE 383

OUR PICTURES:

"U. S. Volunteer." Negative by G. H. Lorey, Saratoga Springs, N. Y. Print on Special Rough Velox.

Glimpses of Newfoundland. From Photographs by S. H. Parsons, St. Johns, N. F.

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WILSON'S PHOTOGRAPHIC MAGAZINE.

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THE NATIONAL CONVENTION—OFFICIAL REPORT.

THE Twentieth Annual Convention of the Photographers' Association of America was held at Milwaukee, Wis., from July 23d to 27th inclusive, under the Presidency of S. L. Stein, of Milwaukee.

Monday, the 23d, was devoted to completing arrangements at the Exposition Building, where the convention was held, and to receptions given by the Wisconsin Association and the Milwaukee photographers to visiting members and delegates at their respective hotels. The attendance of photographers was unusually large, Treasurer Barrows reporting that over 800 members had paid their dues before the end of the first day's business.

FIRST DAY—MORNING SESSION.

The convention proper was called to order by President Stein at 11 A. M., Tuesday, July 24th, in one of the halls of the Milwaukee Exposition Building, which was crowded to overflowing, there being standing room only.

After pronouncing the Twentieth Annual Convention formally opened, President Stein introduced the Hon. D. S. Rose, Mayor of Milwaukee, whose address of welcome follows:

MR. PRESIDENT, LADIES AND GENTLEMEN: I deem it my solemn duty to enter a protest. I believe that the Committee of Arrangements is deserving of a resolution of censure (pointing to a pitcher of ice-water on the President's table). I observe that there is a water pitcher on the table, labelled "ice-water;" and this is the city of Milwaukee! (Laughter.) It is a reflection upon our reputation. You all know that we manufacture a product that "has made Milwaukee famous" (renewed laughter); and I supposed, of course, that the Committee of Arrangements had provided us this morning with at least one pipe-line.

I am very glad, indeed, to have the opportunity as a representative of this city to extend a greeting to so large an assemblage as is gathered here this morning. It is something of a surprise to me, because I did not understand the magnitude of the interest represented here; still, I ought to have known that when Milwaukee furnishes a President for an Association, that it could be no small affair. (Applause.) There are so many demands upon our citizenship to furnish men fitted to occupy places of trust and distinction that we are not compelled to recognize small-fry organizations; consequently, I should have known that when Milwaukee gave the man the Association would be worthy of him; and I am sure that such is the case. (Applause.) I undertake to say that there are many here to-day who are strangers to our city, and who have come here for the first time. Let me say, then, that we have here a city of some 300,000 population; and, while our commercial interests are not great, our manufacturing industries are large. The manufactured product of our city during the last year was valued at $158,000,000; and with this magnificent showing, it seems to me that our city is entitled to be recognized as one of the great manufacturing centres of the United States. (Applause.) And while it is true that the manufacture of one product and the enterprise and progressiveness of those engaged in that industry have served to gain us that distinction all over the world, it is also true that that product is only one of many that have all contributed their full quota toward the grand total, and which have all helped to make Milwaukee famous as a manufacturing centre. The beer product of Milwaukee last year amounted to nearly $15,000,000, and when you consider this in comparison with the total I have named, you can see that it pales into insignificance almost; and by that I don't mean, however, to cast any reflection upon those engaged in that magnificent industry, because we esteem it such. Our population here is cosmopolitan. Every civilized nation upon the face of the globe finds a representation here, and we find all of them working together in perfect harmony, in perfect accord, all animated by the same mission, to accomplish the greatest good for the greatest number. The bringing in of so many foreigners here has served to bring in the customs of the old countries from which they came; and as a result, we maintain, perhaps, the most liberal government of any city in the United States. We propose—and it is our policy—to grant the greatest liberty consistent with good order and good morals. We can maintain this policy here; we have no difficulty in doing so, for the reason that our people are a law-abiding and order-loving people; the percentage of crime is the lowest of any large city in the Union; and, while we never require our places of public resort to be closed, and while we are a large

beer producing city, it is a fact, and which is frequently observed, that you will see here less intoxication upon the public streets than in any other city in this whole country. (Applause.) If you have time, I would invite you to visit our public institutions. Our City Hall, erected only a few years ago at an expense of $1,000,000, is one of the finest office buildings of its kind in the country; our splendid public library and museum building are monuments which commemorate the enterprise and the intelligence and thrift of our people; our public museum collection is the fourth largest of its kind in the United States; and our public library collection compares favorably with that of any other library in any large city of the country; it is a place of popular resort for the youth of our city; you can go there almost any day or evening, and you will find our children there engaged in prosecuting those opportunities for study that the institution affords. Our public school system is a part of the public school system of the old Badger State of Wisconsin, a system that has served to carry forward the movement of education, that turns away from its portals the child of not even the humblest parentage, but guarantees to all equal opportunities for education and advancement. Upon these firm foundations many of the professional and other successful men of our State have built successful careers. We are proud of our educational institutions, not only of Milwaukee, but of the great State of Wisconsin; they compare favorably with those of any State in the grand constellation of the Union. Our park system, though young in years, is old in beauty and attractiveness; and if you will have leisure I know that you will enjoy a visit to some of our numerous parks. The question of how to establish a park system is one that has agitated students of political and social economy throughout the whole land, whether to have one large park in a city, or a large number of small parks. This has been frequently debated and much discussed; but we have arrived at the conclusion that it is best for our population to have a large number of small parks; and we have established them, taking them almost to the threshold of all our people, so that the poor may have opportunity to enjoy here what only the rich can enjoy in the larger cities of our country. We save transportation expense, and we save time and all that by placing our parks in the various sections of our city where they are accessible to all. I know you will enjoy a visit to them.

We are always glad to have strangers come and meet us; we are glad to have them see what we have, because we aim to keep up with our sister cities in the rapid march of progress. Ours is a city of homes; we have no tenement-house district. While we employ nearly 100,000 operators in our commercial and manufacturing industries, it is a fact that the largest proportion of them own their own homes. You can go into the outskirts and find the cottages of our laboring people, and see them there rearing their children in the sunlight and the fresh air that the great Giver of all Good intended them to enjoy, carrying in its wake health and cleanliness, and making to the advantage of our city in all ways.

We want you to feel while you are here that you are our guests, that we are glad to have you with us, and that everything we can do to contribute to your happiness will be gladly done. We want you to feel when you return to your homes that you have not only profited by this meeting of your Association, which is formed for your advancement and the promotion of your interests, but we want you to feel that you have had a pleasurable time also through our efforts here, and that you will look back to this visit to Milwaukee with the happiest of recollections.

In behalf of our people I extend to you a most cordial welcome. (Applause.)

After the applause had partially subsided following the Mayor's address three cheers and a tiger were proposed for Milwaukee's worthy Mayor by the President, and were given with hearty acclaim.

At this point Mr. G. Cramer, of St. Louis, was seen coming into the hall, and was asked to come forward and be seated on the platform by the President. The following were also seated on the stage, viz.:

Ex-President John Schneider, of Columbus, O.; ex-President C. M. Hayes, of Detroit; ex-President F. W. Guerin, of St. Louis; also of the present corps of officers, Mr. George B. Sperry, First Vice-President, of Toledo; George M. Edmondson, Second Vice-President, of Cleveland, and J. George Nussbaumer, of Buffalo.

The President called for reading of communications, and the following were read by the Secretary:

TO THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

GENTLEMEN: Some special work which cannot be attended to later keeps me away from you this year. You don't know how I have struggled to content myself with staying home this time; but I cannot be content, and want more and more every day to kick over the traces and take the cars for Milwaukee.

I promise not to do it again, and you can count on me next year as being pretty near the middle of the puddle.

With best wishes for a most enjoyable convention,

Yours truly,

PIRIE MACDONALD.

MY DEAR BARROWS: Enclosed please find a check for $2.15 to pay my dues for 1900. Sorry I can't be with you to enjoy the big convention you will have. Remember me to all the boys. Will see you next year. Very truly yours,

GEO. STECKEL.

J. GEORGE NUSSBAUMER,
Secretary P. A. of A.

FRIEND NUSSBAUMER: Sorry I can't be in attendance. Wish you a most successful convention.

DAVID ROSSER,
Honorary Vice-President P. A. of A.

President Stein then delivered his address, which follows:

FELLOW CRAFTSMEN: I have felt a little curious at times as to how the annual speech from the President appears to you—whether it is a part of the proceedings you would be sorry to miss, or whether it is an infliction to be meekly submitted to. I heard someone say the other day that one definition would equally apply to nearly all the speeches he had ever listened to. That is, that they were one-tenth sound sense, and nine-tenths "flummery." Now, I do not want to talk flummery, nor do I suppose you want to

listen to it. But there are one or two points I would like to touch upon which have nothing to do with fads or theories. They are sound sense and solid business.

One of them is *professional jealousy*. I wish that some of our professional friends could realize more fully the blighting effects of this needless evil, and how inevitably it re-acts to the prejudice of those who display it. It is not merely that it is a grudging confession of pitiful inferiority, but it cankers the very root of that mutual trust and esteem, without which such an organization as ours must ever fail of achieving its most valuable purposes.

We want to come together more freely upon an even footing of friendly confidence, admitting of a generous, fraternal rivalry that shall leave no room for carping criticism or little-minded bickerings. If one lags behind us in the race, let us cheer and encourage him. It will mean no loss to us, while it may mean much gain to him; and if it stimulates him to his betterment, not only he but the whole profession is a gainer. If one forges ahead of us, he has earned our applause, and should not be denied it.

No man under the canopy ever found himself or any other man bettered by harboring a prejudice, whether it be well or ill-founded. It is like a wall that girds us in from all the beauty and the splendor of the broader horizon of good will and fellowship that lies there—wasted to some of us, simply because we will not trouble to step outside the wall to enjoy it.

The second point is the need of *more original thought and treatment*. It seems, somehow, as if there are relatively few who care to use their wit and ingenuity for the creation of new effects in treatment, method or display. The remainder seem to be content to be simply copyists. Even in such a matter as a mount, for instance, many are content to blindly follow the lead of some clearer-witted member of the craft, instead of setting their wits to work to create something distinctive of their own. Now this free and easy appropriation of another man's ideas is distinctly a confession of inferiority, which any man who takes a legitimate pride in his profession should be ashamed to make. The men who do this sort of thing are not lacking, as a rule, in technical knowledge, in experience, or in capacity. They can do better if they *will* do better. Why is it that they *wont?*

All they would need to do is to follow Etty's precept. Do you remember his reply to the man who asked him what medium he used to obtain such purity of coloring? He said, "Brains, sir." That is all the copyist needs to do to lift himself out of the rut he travels in—use his brains.

And the third point I want to touch upon is *prices* The cutting of prices is a great and crying evil which is hurtful to all and helpful to none—not even to the man who pays the low prices, for he gets the worth of his money—perhaps, but certainly no more. Keep up your prices. If you make cabinets worth ten dollars a dozen, charge ten dollars for them. Stick out for a good price for good work, and don't think there's either money or glory in cutting the price to five. Remember that your prices should never be wholly controlled by present and local conditions, though they are always to be taken into consideration. Back of them there is always a vista of years of effort and study, for which there was seldom, if ever, a present reward, though hope tinged the future with all sorts of rainbow beauties. And this is that future. Now, if ever, is the time for those hopes to be realized. But that realization rests with you, and by cutting prices you insure the surest of all possible means of never attaining it.

When Whistler, the famous artist, exhibited a series of color sketches some years ago at the Grosvenor Gallery in London, John Ruskin declared that it was disgraceful to call such daubs pictures, and accused him of "Flinging a paint pot in the face of the public." Whistler sued him for libel. On a purely technical point he gained his case, but the justice of Ruskin's criticism was approved by the verdict of one farthing (that is, half a cent) damages.

But in the course of that famous trial Whistler made a reply that is especially to the point in this connection. He was being cross-examined and had stated that these "Nocturnes" and "Symphonies," as he fancifully named them, took him about two hours to paint, and he charged $1000 apiece for them. The counsel asked, "And do you really contend, Mr. Whistler, that a picture which only took you two hours to paint can be honestly worth a thousand dollars?" Whistler replied: "You forget the years of study that made it possible for me to paint that picture in two hours." Now, that reply was a good one, and, when fixing your charges, you want to remember the years of study that have brought whatever powers you possess to their fruition.

But that fruition will depend as fully upon the cultivation, upon correct lines, of your perceptive appreciation of artistic beauty and tasteful treatment as it will upon the mastery of the technical details of your profession. Be especially chary of fads, for they generally run to extremes, and extremes are always to be avoided.

There has been a striking similarity between the trend of photographic art of recent years and that of the European schools of art since the days of the little band of enthusiasts who are now known to history as the Pre-Raphælites. They revolted at the lifeless formalism of the art of their day, and aimed to correct the prevalent conventionalism of mediocrity by infusing art with a purer and more elevated spirit.

One means by which they aimed to do this was expressed in their motto that "Nature should be painted as it is, not as it looks to be." With the rabid enthusiasm of reformers they went to extremes that many thought ridiculous. If a bird was so far away in a landscape that it was hardly more than a speck in the picture, they would yet paint that bird's eyes because the bird certainly *had* eyes, even if the observer was too far away to see them. When Millais painted the "Huguenot" he spent seven months painting the moss upon the wall and when Holman Hunt sent his "Carpenter's Shop at Nazareth" to one of the Paris expositions, the painting of the shavings was the sensation of the year. The Parisians raved at the care with which even the most trivial detail of those shavings was given, but when the artistic merit of such rendering was discussed they said little, but shrugged their shoulders very expressively.

As was to be expected, this fervor was followed by a violent reaction, and the pendulum swung from one extreme of the Pre-Raphaelites, where form and accuracy of detail were chief essentials, to the other extreme of the impressionists, as in some artists of the Barbizon school, who paid little attention to drawing, but much to color impressions and atmospheric effects. And now we are passing through another reaction, but one which is less violent. The best art avoids both extremes, but combines the best features from each.

So it has been with photography. The first impulse to artistic betterment came in the form of a craze for sharpness. It was, as with the Pre-Raphaelites, carried to an undue extreme and led many to revolt. And then came the swing of the pendulum to the other extreme of fuzziness. From pictures that were

too sharply defined we came to have pictures that, as with the impressionists, lacked any sort of definition at all. And now, as with the painters, there is a second re-action, which is bringing us to a condition which is healthier and saner than either extreme can ever be, for it avoids their faults and combines their merits.

It is upon such lines that the best photographic art of to-day is being turned out, and it is upon such lines that I would urge you all to work, for therein is the truest artistic expression, and thereby will you insure your most certain reward.

President Stein: The Executive Committee had a meeting a short time ago, and made some changes in regard to the hanging of pictures. (President Stein read the clause referring to same in the regulations printed and sent out in advance of the convention.) The Secretary will read the amended action taken by the Executive Committee in relation to this matter.

Secretary Nussbaumer: "It is moved that the exhibits rejected by the Hanging Committee be hung, and that only such exhibits as pass the Hanging Committee be awarded a certificate of acceptance as provided in the rules governing the exhibition." This was seconded and carried. (Applause.)

President Stein: In this way no pictures were rejected, even though not hung in the class where entered; they are hung aside, but they will not get a certificate of acceptance. The next order of business is reports of committees. There being none at this time, we will pass to the next order, and I take pleasure in introducing Mr. W. I. Scandlin, editor of *Anthony's Photographic Bulletin*. He comes from New York (applause), and will address us on

The Progress of Photography.

It would be manifestly impracticable at this time to follow from its beginning the steps by which photography in little over half a century has reached the position that it occupies in the world of affairs to-day.

The story of its discovery and growth up to within a comparatively recent date has been presented to this Association at former conventions by men better fitted to recite its history and to claim a share of the glory attaching to its successes than am I. It is, therefore, my purpose to speak of those advances that have been made during the past four or five years only, which, I believe, will be found to compare favorably with the progress recorded in any similar period since its beginning. They will be found, however, to consist more largely in the development of lines previously suggested, in the evolution of processes from experiments undertaken in the past, and in improved methods and appliances than in new or startling discoveries. We, members of the Photographers' Association of America, are mostly wedded to and bound up in a single department of photographic work—that of portraiture—and I sometimes wonder if we fully realize the tremendous scope of photography and the fact that while we are utilizing it in our own field of labor, others, working with the same tools that we employ, are achieving results of great importance in the world of science, commerce, and natural history, and that the field it covers is extremely broad, and widening year by year. It is being appropriated by one department after another of scientific and mechanical work, until to-day there is scarcely to be found in this or any other progressive country a laboratory, hospital, college, observatory, machine shop, or student's den without its photographic equipment, and it is along the lines of scientific photography, I think, that the most startling progress of the later years is to be found. At any rate, it is so to the casual observer, for within this time the anatomy of man has been made visible through the sense of sight through the discovery of the X-ray by Prof. Wilhelm Conrad Röntgen, whose achievement has been recently recognized by the National Academy of Sciences at Washington in the award of the Barnard medal, an honor only awarded once in every five years, and then to the person adjudged to have made the most important discovery in the scientific world during that period.

It is pleasing to note in this connection also that radiography has, since its discovery, received its widest and most expert application in America and at the hands of American workers.

Photography as applied to astronomical research has also been the means of important discoveries in the solar system, and in the hands of such men as Professors W. H. Pickering, of Harvard University, Geo. E. Hale, of Yerkes Observatory, E. E. Barnard, of Lick Observatory, and other eminent astronomers has added largely to the fund of knowledge concerning celestial matters. The most important results are looked for from its use in the observations of the sun's eclipse in May last, which are not yet fully known.

The Brashear curved plates, for use in photographing large areas of the heavens, are a great improvement over the ordinary plate, inasmuch as by their use the natural curvature of the lens is counteracted, and all portions of the plate, even to its extreme edges, may be brought into perfect focus. A great saving in labor and material is the result, together with increased accuracy and facility of comparison.

The experiments of Prof. R. W. Wood, of the University of Wisconsin, in photographing sound waves, have demonstrated to a remarkable degree the capability of photography as a recorder of phenomena in the scientific world. These photographs show plainly the successive vibrations of the atmosphere as it is disturbed by a sound, which, passing through the air, produces waves that may be likened to the ripples in a pool of water set in motion with a pebble.

Photography in its application to the study of natural history has rendered important service in the study of animal life, and the student of zoölogy is deeply indebted to the skill and untiring perseverance of such men as the brothers Kearton, of Eng-

land, Dr. R. W. Shufeldt, of Washington, F. M. Chapman and others who have given to the world invaluable photographic records of bird, beast, and fish in their natural abodes and under conditions and surroundings of nature. Careful and important studies are also being pursued by its aid in the field of botany, and photographic investigations show us the growth and decay of plant and vegetable life.

The importance of photography in surveying is now fully established, and the uses to which it has been put by such workers as E. Deville, of Canada, Mr. Mendenhall, of the United States Coast and Geodetic Survey, Col. A. Laussedat and Commandant Victor Legros, of Paris, J. A. Flemer, of Washington, and others demonstrate beyond a doubt its increasing value in topographical record work.

Balloon photography, too, has become a most important branch of the military equipment of nations, its use being much more general since the advent of smokeless powders than before. The history of the war in South Africa, yet to be written, will undoubtedly contain reference to the important aid rendered by this branch of the service.

Kite photography also has made material advance under the investigations of Wm. A. Eddy, several officers of the U. S. Army, and others, and the photographing of projectiles, an important branch of military science, has improved greatly.

Another branch of our science, mention of which seems to find a natural place at this point, is that of telephotography, the development of which is rapidly proceeding, and from which many important results may be expected.

The very exhaustive investigations carried out by Prof. Russell, of England, have brought to light the fact that many bodies hitherto unsuspected of the power to affect a sensitive plate are nevertheless active to a greater or less degree and in peculiar manners. This knowledge will be sure to find application at no distant day in some form as yet perhaps unthought of.

A branch of photography which, probably next to its application in the development of X-ray work, has most noticeably attracted public attention, and one which holds great possibilities in almost all fields of scientific and popular interest, is to be found in animated photography, so-called. The improvements in this field during the last few years have been truly remarkable, and it is to-day a factor of no small moment in the world of amusement and instruction. America holds a prominent place in the development of the photography of movement, and the work of Muybridge, Edison, and others in this field has been most important. Its development has involved the expenditure of large sums of money, and its growth and still larger adaptation seem to be fully assured.

Photography in colors, the long-sought problem of the scientist and the elusive vision of many a photographer to-day, is still unsolved, though a nearer approach to its realization seems probable with each succeeding year. Mr. Fred. E. Ives, of Philadelphia, with his wonderfully accurate Kromskop, shows us images of great beauty and faithfulness to nature, not only in the brilliancy and delicacy of her colors, but in the effect of atmosphere as well. If his charming effects could be translated into tangible prints, instead of vanishing when the conditions that produce them are removed, we might justly claim that color photography is an acknowledged fact. Lippmann's scheme, based on the interference of light waves, is also working out some extremely interesting results, and Prof. R. W. Wood's later experiments and demonstrations show decided progress on this line. Here, too, are to be found some excellent results, worked out under the McDonough and Joly-Sambra methods. With the light of the experience and investigations already made, and in view of the deep interest centring in this branch of photography among scientists all over the world, it seems probable that still further progress may reasonably be looked for at almost any time.

In its application to the printing press, photography has shown a steady and rapid improvement in recent years, and owing to its growth in this direction the literature of the day is illustrated as it has never been before in the history of mankind. The importance of this tremendous spread of illustration, I believe, cannot be overestimated as a refining and educating influence on the public mind, and it has, I think, exerted a very large influence toward creating a demand for and raising the standard of portrait photography in all quarters. It is becoming more and more a factor in the educational systems of the nations, and in this important application, I believe, America easily leads the way.

In the field of portrait work no single discovery stands out with startling prominence, but the progress nevertheless has been steady and sturdy, and the art-science of photography, as practised by the portraitist of to-day, stands in the business economy of our busy life as an honored profession, where only a short time since it ranked as a trade of minor importance. The growing importance of this profession may, I think, be gauged quite closely by the efforts put forth among the manufacturers and dealers throughout the world in catering to its needs and producing new apparatus and material for its use and consumption. A glance over the history of the past few years will show vast investments and development along these lines, and the production of printing papers both in this country and abroad may be cited as an illustration of this statement. Large enterprises have been established and demands created by the improved products, which a few years since would have been considered impossible. It is only necessary in this connection to call attention to the various brands of the American Aristotype Company's manufacture, which have met with deserved popularity among professional photographers, or to the several gaslight developing papers introduced by the Nepera Chemical Company under the well-known name of Velox, which have found special application to the needs of the amateur and to commercial photography.

Carbon and platinum printing, which have always been subject to fluctuation in popular esteem, are receiving more attention than in previous years, and each is demonstrating its fitness for many kinds of work in a manner admitting no doubt or question.

In the manufacture of dry plates the improvement has been more in the nature of perfecting the quality of plates already known than in the production of novelties, the orthochromatic quality and the backed

or non-halation plate being much more generally used now than in the past.

Films for use in the smaller cameras have been brought to a high state of perfection and convenience in manipulation, and for hand work and tourist purposes in general are gradually superseding the more cumbersome glass plates. An important element in their popularity is to be found in their manufacture in small rolls, making possible without waste a limited number of exposures, and also in the application of the daylight system, by means of which the necessity of a dark-room for loading and unloading the camera has been done away with. The very marked improvements which the last few years have witnessed in the size and perfection of the leading makes of cameras to which they are adapted has also emphasized their practicability and popularity.

In lenses the most noticeable advance is to be found in the development and perfection of the anastigmats and in the wonderful capacity of these lenses when understood. Another important achievement is in the application to these lenses of the telephoto attachments—the results obtained by Dallmeyer, of London, being the most important, while the publication of a very complete treatise on the general subject of telephotography from the pen of Mr. Thomas Dallmeyer is an important addition to the literature of photographic optics.

The matter of control in the development of plates has received a good deal of attention during the past few years, and some important additions have been made to the list of developing and controlling agents, among which may be mentioned Ortol, introduced by Hauff, and Imogen, which, together with Agfa as the intensifier, owe their existence to the investigations of the Actien-Gesellschaft Fabrik, of Berlin. The application of ammonium persulphate as a reducing agent is also of recent date and gives promise of becoming a valuable aid in the control of density, either locally or in general.

The attempt to combine development and fixing, first suggested, I believe, by an American, Mr. Milton B. Punnett, seems likely to prove more than a novelty.

Specialization or individualism, such, for instance, as the gum bichromate printing method, which has found more or less favor abroad, and brush or local development of platinum prints, which has found many admirers in this country, have been the subject of much discussion and are warmly advocated by many for certain lines of work, and it may be said that both these innovations have qualities which, in the hands of intelligent workers, possessed of the true art instinct, are possible of producing results of great excellence and variety. Like fire, however, they must be handled with care and an understanding of their power for good or evil. It is, I believe, probable that this method of controlling the print by local treatment will find increasing application in the production of large work, where strength of treatment and the evidence of individuality on the part of the artist are desired.

The matter of copyright law is still under consideration, and is worthy of more careful attention than it has received at the hands of this Association. The lack of progress in this direction is lamentable, and serious consequences are likely to follow if the profession fails to legislate upon it at an early day. The matter will probably be brought before this convention in some form or another, and should, I believe, be carefully considered.

The various matters to which I have called your attention in detail are evidences of material growth and progress in the science of photography, and we, as photographers, may congratulate ourselves upon occupying a more advanced position in our profession to-day than ever before; but our progress and position depend less upon the material advances recorded than they do upon the broadening effect that has been wrought in the mind and capacity of the photographic worker during the past few years. The increasing demand for photographic literature is an evidence of this growth, but more than all else is it to be found in that the importance of our conventions, both State and national, has come to be realized; and the value resulting from exchange of ideas, comparisons of work and methods, coupled with the lectures and demonstrations now forming such important features of these gatherings, is apparent in every portion of our country where photography is practised. The average photographer has awakened to the appreciation of the fact that not all the photographic knowledge of the universe centres in his own studio, but that other members of his craft have skill and ability as well as he, and that by mingling with his fellow-workers and keeping in touch with the results of their labors he may gain much of material benefit, and that without disadvantage to himself.

It is sometimes said that one cannot afford the time and expenditure necessary to attend conventions, but I believe that a careful study of the history of portrait photography in this country will clearly show that it is a false economy which keeps the photographer away from conventions, and that, with very rare exceptions, the man who rises in our profession, whose work is universally recognized as being good and becoming better, and who consequently is enabled to increase the prices of his output and obtain better returns for his labor, is he who regularly attends and interests himself in conventions.

In closing, therefore, I would say that as our progress has been, in my opinion, more marked during the last few years than in any similar period of our history preceding, it is, I believe, largely because of combined effort and intelligent work based upon the results of others as well as upon our own individual skill, and I would pay a hearty tribute of appreciation to those of our fellow-workers who in the past have given lavishly of their time, their experience, and their means toward the organized promotion and advancement of our art-science. May we, as photographers, give our continued and sturdy support to State and national Associations, that the progress of our profession may be continuous, and that we, each and all, with the world at large in which we live, may reap increasing benefits from the development of our business in the time to come.

President Stein: Before hearing the next speaker, I wish to make some announcements. There will be a demonstra-

tion of the McDonough process of color photography, commencing at 3 o'clock this afternoon. Try to be on hand at the hour. The Committee of Arrangements wish me to say that there will be a tally-ho ride for the ladies, to show them the town, to-morrow morning at 9 o'clock; they will gather on Jefferson Street side of the Pfister Hotel. Remember, it is only for the ladies! (Laughter.)

I now take pleasure in introducing Prof. O. W. Beck, Curator of the Fine Arts Academy of Cincinnati, Ohio, who will deliver a lecture on the subject: "What are the Principles of Beauty in Art?"

[Because of the difficulty of making it intelligible without numerous illustrations accompanying it, it is considered impracticable to give a verbatim report, but the following is an abstract of the main points covered by the lecturer:]

What Are the Principles of Beauty in Art?

Mr. Beck's lecture was illustrated by twenty reproductions of modern pictures, most of which represented the work of members of the Association, but the authors of which were not named for obvious reasons. There were also a few diagrams to illustrate technical points in composition; but these were so drawn that they directly elucidated the structure of the pictures themselves. His discourse not only adhered to the subtle subject he had to deal with, but was, in fact, a criticism of the work before the convention, pointing out the merits and demerits of it in such a way as to lay bare to the photographers present the reasons for the criticisms advanced. The promising, healthy tendencies found in the convention exhibits he drew attention to, and explained and encouraged, but at the same time he did not refrain from severely criticising inartistic methods. For instance, the intensely black backgrounds were taken to task for their destruction of the atmospheric quality and for dragging realistic art over into decorative art. A number of photographs were pointed out as having such density and force in the preponderating mass of black in the background as to fairly throw the figure out of its picture frame. Proceeding, the lecturer said:

"Neither in nature nor in the highest realistic art of the past or the present has black been found; since black is not atmospheric the great artists have made more abundant use of the intermediate tones, making the half-tones the ground upon which to base their darker tones and play their lights. Portraiture is not made by simply throwing a light upon the face that will model it sufficiently; that produces only a likeness. Portraiture depends upon the manner in which the attention is held in the head and in the face by the management of the light and dark spots." The speaker then illustrated by pointing out in the pictures he showed certain instances where the portrait was destroyed simply because a white sleeve so drew the eye away from the head that it puzzled the observer as to what he was to look at or appreciate. The danger of using any kind of matt to mount photographs on was illustrated by actually destroying a good picture by placing it on a matt that interfered with the seeing of the face. How to make a background to fit exactly each new figure was dwelt upon at length, and it was shown that the field was hardly touched upon by modern photographers. This proved the most interesting part of the discourse. Flatness, due to the lack of modelling, was condemned, as it had nothing to do with realistic art, and was a feature of the purely decorative. Since flatness is a prevalent flaw in a great proportion of the year's output, it is hoped that the explicit lessons on this subject will diminish its recurrence in next year's work. The lecturer explained that many were making of their pictures actual stagey effects. Then followed drawings showing how to avoid making a stage of the picture; how to make a figure belong in the given space. Upon this depends whether a figure is to look conscious and awkward, or whether it is to have that quality which we call "presence;" in other words, to appear "intimate," yet not obtrusive.

Much stress was laid upon the definition of "beauty in art" as differing from the subject of either "beauty" or "beauty in nature." It was lucidly explained by a story about Rembrandt's etchings of beggars. As is well known, these beggars taken for subjects by Rembrandt were most repulsive as individuals, yet when treated by the artist's mind and hand they became valuable as artistic models, and were sought after by people of culture. Further, that

the people of culture would reject the picture of a most beautiful woman, child, or infant, if badly done, thus establishing that art has little to do with nature, and that *art is treatment.* A beautiful type will add to the attractiveness of a picture, but it cannot save the picture when beauty is not in the treatment, revealing the artist. Ninety out of a hundred photographers believe that beauty lies in the facial expression, or in the beautiful form of the person or thing photographed; but this view is erroneous, and prevents the photographer from reaching the highest ideals of his art. True art depends upon abstract beauty as a basis, and not first upon story telling or sentiment. The fabric of abstract beauty was then shown by diagrams, and the problem was so developed that every man carried with him a clear view of what the black and white art to which photography belongs is based upon. The practical side was kept in the foreground, as it was recognized that the points learned must be embodied in the coming year's work, to improve, to make it meet the public's longing for better art, and for more individuality. Although the lecture was delivered after the four previous speakers had held the attention of the large audience up to nearly one o'clock, yet the audience was held throughout the hour of lunch until nearly two o'clock, clearly proving that the American photographer is anxious to get at the fundamental principles that underlie beauty in art.

President Stein asked attention for a few minutes to hear an announcement by Mr. H. S. Klein, of Milwaukee, the President of the Milwaukee State Association, who said:

I will not detain you long. It is a pleasure to have the opportunity to greet you here in the name of the Wisconsin Photographers' Association. If it was not for the late hour I would be delighted to speak to you more at length, for my heart is just filled with greeting; but feeling does not set well upon an empty stomach, so I will be brief. This evening an entertainment is provided in the shape of a performance at the Davidson Theatre, entitled "The Highest Bidder," which is tendered by the Wisconsin State Photographers' Association. No tickets of admission will be given out, as the entire house has been reserved for all those who wear the button which admits you here to this convention. Do not fail, therefore, to come early, as there are no privileged seats; all are equally reserved for you all; come with your wives, your sisters and your aunts; and if you have not a wife along, bring someone else's wife or sister; there are plenty of them here. We want to fill the entire house, and we want you all to come. Anything our Association can do to make you comfortable we will do while you are here; we are at your service. We have established headquarters at the end of this hall, and there you are welcome at all times to any information we can give you, or anything else we can do for your pleasure.

On motion, the meeting then adjourned.

Second Day—Morning Session.

The Convention met pursuant to adjournment, and was called to order at 10.20 A. M. by President Stein, who announced that the first business in order would be the reading of communications.

The Secretary read a communication from Mr. Jex Bardwell, of Detroit, Mich.

To the President and Members P. A. of A.:

I am sorry I cannot be with you next week. My best wishes for the success of the convention, and I am sure the Milwaukee folks will try their best to make your visit to their city a pleasant remembrance. Our photographic friends who may be with you I am sure will profit much by the convention. An old man's advice to the young photographer is to visit every photographic convention within his reach. Read everything photographic that you can get hold of, remembering that in every bushel of chaff we may find a few grains of wheat. There never was a time that required so careful a watch to keep in touch with the fads and changes that occur in photographic practice, and nowhere can these changes be learned and observed as at our photographic meetings. You can learn of these changes at our city Camera Club meetings. I was at one the other evening and I saw some of the members gazing at a new frame that had been recently hung. I should have passed it by had not one of the members said to me, "Is not that splendid?" I then moved a little closer, but the member said, "Don't go too close, it may look a little fuzzy, but as soon as you can make out the intent of the photographer then you will see its beauty. That is art, my dear fellow."

Just then a friend met me and asked if I would be in my room the following morning, for he wished to show me a new lens he had got. It cost a deal of money, but it was warranted to him to cut sharper and to give better definition than any other maker's lens on the market. I cast a last glance at the art photograph, and pondered muchly.

And now, President Stein and the members of the convention, receive my best wishes for the success of

the convention, and for the satisfaction and photographic profit that may accrue from it.

Yours fraternally,
JEX BARDWELL.

July 23, 1900.

Secretary Nussbaumer read the Treasurer's report, which, as stated by the Chair, had been considered at the last meeting of the Executive Board, and was approved by that body.

On motion, the same was now approved as read.

Secretary Nussbaumer read the report of the Secretary for 1899, respecting which the Chair made the same statement, and on motion the same was approved as read.

President Stein: The next assignment on our programme was to have been an address by B. J. Falk, of New York, on the subject, "The Copyright Question of To-day." Mr. Falk, however, is not here, but has forwarded a communication on this subject from G. E. Waldo, counsel for the Photographers' Copyright League, which I have asked the Secretary to read. Please pay close attention to it, as this is a matter of vital importance to us.

The Secretary read the following:

TO THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

GENTLEMEN: A matter of the utmost importance to the photographers in this country is the proper protection of the results of their labors by Copyright Law.

The first protection of photographers by copyright was under the Act of 1865. Since that time there have been various amendments, but none making any material change in the original law.

The course of decisions by the courts since the passage of the Act of 1865 has tended to restrict more and more the remedy of the photographer against the infringer of his copyright, until to-day the supposed rights of photographers have, through judicial construction, so faded away as to leave in most instances no remedy against the publisher who has seized the fruits of the photographer's labor.

The Photographers' Copyright League of America has been, for several years, urging such amendments of the Copyright Law as would furnish some rightful measure of protection for photographic copyright.

The present law provides that the infringer shall forfeit all the plates on which the infringing articles have been copied and every sheet of the infringing article, and "shall further forfeit $1.00 for every sheet of the same *found in his possession*, either printed, copied, published, imported or exposed for sale." By the amendment of 1897 it was provided that in the case of a photograph made from an object not a work of fine art the sum to be recovered in one action should not be less than $100, nor more than $5000, and, in case of a photograph of a work of fine art, not less than $250 and not more than $10,000.

The statute further provides that an action for the infringement of a copyright must be brought within two years of the date of such infringement. Until within a few years the courts have held that proof that the copies of the infringement were in the possession of the infringer at any time within two years prior to the commencement of the action was a sufficient finding in possession under the statute.

Of late years, especially since the use of reproductions from photographs as illustrations in the magazines and newspapers has grown to such enormous proportions, there has been a constant tendency to restrict the methods of proof as to copies of infringements found in the possession of the infringer.

In the case of *Backus* v. *Gould*, decided in 1849, it was held that the penalty could only be recovered for the sheets found in the possession of the infringer. The testimony of an employé or other person as to the number of copies in the possession of the infringer was held to be sufficient until the decision by Judge Lacombe, U. S. Circuit Court Judge for the Southern District of New York, in *Bolles* v. *Outing*, that such proof could only be made by the plaintiff or his agent who had seen the infringing copies in the possession of the defendant, or by seizure by the United States Marshal. This rule was upheld by the Circuit Court of Appeals. On appeal to the United States Supreme Court this decision was upheld, with some intimation that the finding must be by the United States Marshal on a writ for the seizure of the infringing copies, although it was apparently the opinion both of the Circuit Court of Appeals and the Supreme Court that the causes of action—the one for the seizure and forfeiture of the infringing copies and plates upon which they were made, and the other for the penalty for the number of sheets seized—might be brought in one suit. These decisions made it almost impossible for photographers to recover any penalty whatever for the wrongful use of their photographs by publishers of newspapers and periodicals, for the reason that the whole edition is sold and already in circulation before the unfortunate owner of the photograph discovers that his property has been taken without his knowledge and consent.

Since then, however, the United States Circuit Court for the Eastern District of Pennsylvania has gone even further in its strict construction of the law. In the case of *Falk* v. *Curtis Pub. Co.*, decided October, 1899, the agent of the plaintiff bought from the infringer one copy of the infringing magazine; suit was commenced for forfeiture and penalties, and there was served at the *same time* upon the defendant two writs—one of replevin for the infringing sheets, and the other a summons. The court held, *First*, that the purchase of a copy by the agent of the plaintiff prior to the commencement of the action was not a sufficient *finding in possession* under the statute. That the finding in possession must be by seizure of the copies of the infringement by the United States Marshal under the writ of the court. *Second*, that such seizure must be prior to the commencement of the action for penalty, although possibly the two actions might be consolidated as one. Yet, as in this case, the seizure and the service of the summons were simultaneous, there was no finding in possession prior to the commencement of the action. Hence, the plaintiff could not recover anything in that action, but must start another one.

If this construction is sustained by the United States Supreme Court it will make a Copyright Law practically worthlesss so far as photographs are concerned.

It is perfectly apparent that before the photographer could retain a lawyer, have the necessary papers prepared, and put the writ in the hands of the Marshal for seizure of the infringing copies, the copies would already be sold and out of the possession of the infringer.

The Copyright League, therefore, has been and is

seeking to have the law so amended as to make it possible to prove and recover penalties for the actual number of infringed copies which the publisher has made and had in his possession at any time within two years prior to the commencement of the action; and to this end it is of the greatest importance that all the photographers of the United States should join with the League in using every effort, proper means and influence to secure the amendments to the law which are absolutely necessary for the protection of all photographers.

Believing that it is for the interest of all photographers that this should be done, the Photographers' Copyright League respectfully requests that you join with us in obtaining the protection of photographers' rights.

Very respectfully yours,
G. E. WALDO,
Counsel for the Photographers' Copyright League.

President Stein: You have heard what Mr. Waldo says in this communication. It is vitally important that we take some steps toward assisting the League, and I would like to hear from some of you, and to see what you have to say on the subject. Quite a number here are using copyrights right along, and are interested in the matter, and those who are not personally interested at present ought to be on account of the profession at large. I suppose I ought to be as much interested in this copyright business as anyone. We have all had cause for complaint in copyrights being stolen. I have lost several suits within the last six months. I know many of you have had occasion to see the necessity for protecting your copyright interests in photographs, etc. I would like to hear from Mr. Schneider on this, who, I think, has had some experience.

Mr. John Schneider: We have had a great deal of copyrighting ourselves, but I have often thought that there is not a man in the business who does not at some time make a picture, or portrait, or something, for which he needs the protection of copyright. Some of us who make a great many of them, after spending a great deal of time and money to produce effects that are artistic, and which ought to be of value to us, have found ourselves insufficiently protected. This ought not to be, and of course we are dissatisfied with the condition of affairs at present. At the last session of Congress I believe there was a strong effort made to amend the Copyright law in such a way as to insure better protection. At present there is no adequate protection afforded for the copyrighting of photographs. I would like to hear from some others. I have some resolutions here I wish to offer, and perhaps the best way would be to read them as a basis upon which further discussion of this subject can be had. I regret that some of those who are now coming into the room have not heard the very interesting communication just read from Mr. Waldo.

Mr. Schneider then read the following resolutions:

WHEREAS, Photographs are now the larger means of illustrating the magazines and newspapers of the day, and are in general demand for all illustrative purposes, they are a source of profit to those using them in this way, and for these reasons they are valuable property to the photographer who creates and owns them; and,

WHEREAS, Photographs are by law subject to the protection of copyright; and,

WHEREAS, The recent ruling of the United States Courts on the "Found in Possession" clause (see 4965) of the Copyright Statutes have made it impossible for the photographer to protect his property against wilful infringers of his legal rights; therefore, be it

Resolved, That the "Photographers' Association of America," in convention assembled, respectfully ask Congress to so amend the Copyright Statutes as to properly protect all copyrighted photographs; and be it

Resolved, That this Association indorse the work done in the past by the Photographers' Copyright League of America, and give it our cordial support in its effort to secure proper laws for the protection of the photographer's copyright, and be it further

Resolved, That the Secretary be requested to prepare and forward copies of these resolutions to Congress.

Mr. John Schneider: I submit these resolutions.

President Stein: The resolutions are before you, gentlemen. What will you do with them? A motion will be in order.

Mr. Taube: Mr. President, I move that they be accepted as read; furthermore, I should like to offer as an amendment that we insert the additional recommendation that all photographers personally acquainted with Congressmen should do all they can to influence their Congressmen to put this matter properly before Congress and secure the necessary action by that body.

Motion seconded by Mr. F. W. Guerin.

A member present having objected to the proposed amendment, and desiring the motion to be simply on the adoption as read, Mr. Taube withdrew his amendment, and the question being put to vote the resolutions were adopted as read.

President Stein: I would like to have everyone of you bear in mind the suggestion which Mr. Taube made, however, and notify your Congressmen, and request

them to assist in this matter. There is no telling when anyone of you may wish to take out a copyright and will need to be protected.

Mr. C. R. Reeves: Wouldn't it be well for the Association to publish copies of this resolution and supply members, that they may study it and send copies to their Congressmen? We would have to specially go after each Congressman if we want anything done. Simply sending a copy of these resolutions to the two Houses of Congress, there to be referred to their committee, would, perhaps, not do the same good as if we made a personal effort with each Congressman. To me the importance of this appears very great. I think we should say to our Congressmen that if they expect our support they will have to assist us; I therefore present that as a motion, that this Association print and distribute copies of these resolutions for such purpose.

Motion seconded.

Mr. Schneider: Less than two years ago this question was before Congress, and the Copyright League was represented there, and were doing all they possibly could to advance the interests of those who desired protection for copyrights. At that time the Baker Art Gallery wrote to every Congressman in Ohio, soliciting their personal influence; both of our Senators and Representatives, and the great majority of Congressmen agreed that if the question came up, and was brought before them, they would give it their consideration. Personal interviews were had at that time, and I think such interviews with Congressmen may be of great benefit. We all understand, first of all, that the element that is fighting us in this is most powerful—the newspapers and magazines of to-day, who are the most powerful enemies that we have to fight. We will have to put forth all our efforts, and even then it is a question whether we will come out on top when this matter is finally settled. You can readily see the importance of this to the magazines and newspapers, and what a great struggle they will make to destroy this copyright protection, even the little which we now have.

President Stein: It has been moved and seconded that the Association print copies of these resolutions that have been adopted, and send the same to the members of the Association, who are to furnish their Congressmen with copies of them. Are you ready for the question?

There being no further remarks the vote was taken and carried in the affirmative.

President Stein: The Secretary will give the matter his attention, and see that copies are sent to each member of this Association and also to the different photographic journals and papers.

The next order of business is appointment of committee on nominations. I will appoint as such committee the following, viz.: Dudley Hoyt, Rochester; F. W. Guerin, St. Louis; Frank Schumacher, Los Angeles; W. H. Moses, New Orleans; George Varney, Chicago. This committee will bring in their report to-morrow morning, which is the time assigned on the programme for the nomination of officers. If any member has anything to offer now for the good of the Association he will be accorded the floor; if not, we will call on Professor A. H. Griffiths to give us his lecture. (Applause.)

Professor Griffiths now coming forward, President Stein was about to introduce him as soon as the applause should subside.

President Stein: I don't think it will be necessary to introduce him, will it?

To this there was a chorus of voices in reply, "No! Don't!"

Professor Griffiths then addressed the convention as follows:

Address by Prof. A. H. Griffiths.

MR. CHAIRMAN AND OFFICERS, LADIES AND GENTLEMEN: It is with a great deal of pleasure that I greet you to-day. Yesterday, feeling that the keynote of that which you are most interested in and would most like to hear spoken of would be in your President's address, I requested by telegraph of a gentleman in Milwaukee to send me his points, so that I had all those before I left Detroit last evening. This morning in the paper I picked up I found a good account, showing that the newspapers were giving some space to the things that interested you here. This, of course, has given me in a way something of the line of thought which I am to take up with you. You have all heard me speak many times; and if I repeat some things which I have said before I hope that they may not come in just exactly the same way. We live and learn; and it is the progress of a nation and of an individual that makes life worth striving for. I find men who gather up their pictures and come to the conventions feeling that they are going to sweep the whole thing before them; and after they come here and take a look at your exhibition, they wish that their pictures were at home. Now, in the past I have tried in a way, crude and abrupt sometimes it was, and in such a manner that you rather opposed it—I tried to bump you, as it were, out of the ruts and once in a while I have pushed you clear over to the other side

of the road, and you have been just as bad there as you were in the former place. Now you are drifting back to the middle ground, to the safe, sure ground. The difficulty is that you are not true to yourselves; you do not think out a policy, or think out a plan; you do not work up to a certain idea which is independent, which is true to yourselves. But you read now more than you used to, and I thank God for it; an ignorant photographer has no business in the business. (Applause.) You look more than you used to; you use your eyes and look at other men's work; you look at paintings, you look at pictures, you look at people, you study their faces, you study their pose, their walk, their character, and all their characteristics; and all that is valuable to you, it enters into your work. The first thing when a patron comes into your studio, into your reception-room, is to make him or her feel at home, make them feel in a good humor: you must have the patrons in a good humor to get the best there is in them into the picture, whether they be man, woman, or child. Let them constantly feel that they are among friends and with friends. Every day you see pictures of people that tell you nothing as to whether those people have a heart or soul; they are without expression; you don't know whether here is the picture of a man who is a banker or a pawnbroker, whether he has the slightest iota of human sympathy in his make-up. You must reflect character in your pictures, and you must draw the true character forth from the patron if you want it in the picture. Now, if when the man first comes into your waiting-room you approach him first on the matter of money. Oh! dear, we all have to live for money, we have to work for money, we have to make our living; some people think it is a grab game, and if you don't grab your share you will not get any. The man comes into your room; we will say he expects to pay five dollars for a dozen photographs, and you instantly commence on the financial side of your business, and you tell him the price is eight dollars. At once there is a shade of disappointment in his face, and it never leaves that face till it gets out of your gallery, and it is in that photograph. (Applause.)

Now and then I get to look at a lot of photographs, and I give the makers of them a talk; and, in place of talking all technique, I give them a talk on phrenology, faceology, if you wish to call it such, because there is nothing else to talk about. I find now and then a collection of pictures in which there are no great things; they are all ordinary, and I can only talk faces then, and I do it because I feel that I ought to impress you with this idea, that there is in every man and woman something of the divine, if you only can bring it out. You must reach them from the side of their human feeling; talk to the farmer of his crops; talk to the Nebraskian of his corn; talk to the Southerner of his cotton; talk to the Chicago man of pork! (Applause.) If you can talk to any man about that in which he is interested you will immediately see his face lighten up, and then is your time to take him at his best. I want the soul of the people whom I love to come out in their pictures.

You are getting past the age of purely mechanical achievement; the photographer is stepping outside of and beyond the mechanical; you are becoming artists, because you are reading, and looking, and because you are no longer copying. Be yourselves; see what other men and women are doing, but then do something yourself—that is what will make an artist of you, photographers. The day is going by when you can retouch and iron out all of a man's character. You now leave a little of it in, and you will gradually only touch out the imperfections and leave all of the soul of the man there. So that when another takes up that photograph he will at once know whether the subject of it was a banker, or a manufacturer, or whether he was a grocery-keeper or a pawnbroker; whether he sells over the counter, or takes in money, or whether he is a philanthropist, or an artist; he will know it instantly. I don't say that everyone cannot read faces. Why, the merchant with whom you deal makes up his mind instantly whether he will trust you or not from your face; he is always reading faces unconsciously; and so with people who come into your gallery—you know intuitively whether you want to take their pictures or not. One man loves children; there is at once a bond of sympathy between all children and that man, so that he gets out of them the very best that is in them, and so he makes marvellous children's pictures. Another man makes pictures of young ladies of fashion, of women who dress because they are pleased with it, and wish to please their friends—women who pose before the world as the leaders in social life. The photographers who best succeed with them are those who can best draw them out from that side. And, again, we find the photographer who makes old men's heads, and makes them marvellously well, wonderful works, so that you see the character that their sixty, seventy, or eighty years of life has written on the faces of those men or women. You may think that you make a face, and you do. God makes our bodies, but it is what you live that comes out in the face, in the character, in the walk. I said of Bryan, whom I saw at Lincoln, when he walked out of that hall, that he was a stubborn man—I am not talking politics! I am talking about men!—because he put down those big feet flat; that is all I wanted to know of him. (Laughter.) You people who think and are honest in your Democracy, that you can lead that man will find out that he will lead you! That stubbornness may be good, and may be a bad characteristic. Every man's character is brought right out in his make-up. It is the studying of this character indication, together with thorough familiarity with all the laws of manipulation of the materials with which you have to deal mechanically, which will make successful photographers.

A few years ago everybody was making Madonnas; there wasn't a single exhibition at which there was not a lot of Madonnas. What a host of sacrilegious women they were, beautiful, but without soul; and I condemned you for it; I told you to leave Madonnas alone, that there was only one woman in a million who could pose for a Madonna, and you could not live with her. A Madonna would be a woman who was so far above you and all the world, secure in her own place both here and in Heaven, because she was the mother of the King of the world, that no power, surely no human power, could live in the same house with her. You stopped making Madonnas then, and you began to make old men's heads and old women's heads; and every old man and old woman in the country was drawn out and filled up your exhibition. And I am glad of it, because it gave another phase of character; but now as I take a glance at your exhibition I find young men and young women, children, and middle-aged and old-aged people; and I find that you are on a territory that you can handle, on territory that you understand, on territory that you know. Yesterday your President said, "Don't follow fads;" be honest with yourself, is what I mean. Some man makes a misty, dreamy picture like George Inness, of an evening landscape, and puts into it all the poetry of the dying day, all the mystery of that hour between daylight and darkness, when everything is indistinct and gloomy and full of haze; George Inness could do that. But because you go out and take a smudgy, fuzzy, cottony-looking picture, don't think that you have made an Inness. You have not done

it; you cannot put the soul into it; and it is the soul that makes a picture. Now, I don't care whether a painter uses a brush, or his fingers, or a pallet knife; what I want is the result; and I don't care if you make your pictures sharp, so long as you don't cut the picture out of the background, or I don't care if you give it to me as soft as nature meant it to be under certain conditions, only give me a picture of the friend whose friendship I prize, or the woman whose love I would die for, of the father I honor and respect, of the mother whom I love. Don't take out a single wrinkle that you can leave there; every wrinkle is hallowed by years of trial and tribulation in fighting the battle of life; and they are all honorable scars. Every one is a crown of glory to that old head and that old face; don't take them out! Make youth as symmetrical, as beautifully round as you may, make it full of happy ambition, of love and affection, full of the joyousness of young life, the gladness of living; make childhood with no care, with nothing but indifference to all about them of pain or evil, in unconscious abandon of innocence; but let old age show evidence of having fought the good fight and kept the faith, reaching out with confidence to the life to come. Put into it all the serenity of a nature at peace with itself.

Every once and a while I am told "That's all very well to talk of; that's theory; but here comes a man that wants his picture taken, and we want their money, and we have to take them." I have said to you again and again never let $2 get out of your place, if you can keep it in. Rent comes due promptly, the stock dealer comes around for his money; never allow a dollar to get out of your place that you can keep in it; but if you set your price at $1, you will be a dollar man. Raise your standard high and bring your patrons up to it. Make your pictures tell their story, and then there will be no trouble about price. People in this country are waking up to the fact that we are leaving the days of rag carpets and bare walls; they want the best. They are willing to pay for it, and they only know the best as you make the standard for them; if you make cheap pictures in your territory the people will know nothing but cheap pictures, and they will only pay a low price. You can make a class of good pictures, and even if they don't always meet your highest ideal toward which you are striving always, you can demand a price within reason, and get it; and that is far better. Await your opportunity to make great pictures; make good pictures all the time; and now and then, when some face comes into your gallery that you find is ample for use in any direction that you want, that you can mould like sand, that is your opportunity. Actors walk the boards for $10 or $12 a week for years, doing good work, excellent work, awaiting their opportunity when the star may be sick, or incapacitated from any cause, and then step into his shoes, into his reputation, and then they are no longer cheap men. Just so await your opportunity; it comes to every man. There is a tide in the affairs of men which, taken at the flood, leads on to fortune; grasped at the right moment it will mean success; and success means money and fame. Press and magazine writers have toiled with their pens for years, using their best energies in the struggle, until suddenly they sprang into prominence and position; why? Because they seized the opportunity as it presented itself. A young man writing for one of the London papers at $8 a week was sent to France to report a reception given by the Emperor and Empress of France to Queen Victoria and Prince Albert. He was an unknown man, simply paid a salary of $8 a week and his expenses. He crossed the channel, secured a ticket into that great reception and banquet given for the sovereigns of England; and then he kept his eyes open. He watched the table, every movement, every pose; he noticed that when Prince Albert and Queen Victoria sat down to table they sat down like monarchs, knowing that there was a chair placed behind them by the servant; when the Emperor Napoleon III. sat down and the Empress Eugenie, both looked back to see if there was a seat for them, showing that they had come out of the people. It was a trait of character; he wrote it up, and there came a check to him with a letter saying that his salary was increased to $25 per week, and a position assured him for ten years if he wanted it, simply because he caught something of the people's character, because he was observant, and could see things and tell about them. Now, there is an opportunity for all of you; grasp the thoughts and ideas that are presented to you; take hold of the idea instantly as it suggests itself; it will never come to you unless you are ready to see it as it comes within range. Visit every picture gallery, study every painting that comes within your vision; there is no doubt but that at any moment someone will come in that will afford the opportunity for you to make your fortune and your reputation, but you must be ready. I don't know how long I am to talk. (Cries, "Go on!")

PRESIDENT STEIN: You are not limited.

PROF. GRIFFITHS: But I don't want to tire you. It was twenty minutes before eleven when I began, by the Milwaukee time. (A voice: Never mind, we don't have dinner until 2 o'clock!) I can stand it if you can a little longer. (A voice: "Go ahead!") Your President in his address spoke of many good points; he gave you many good ideas on the business side, as well as the art side. He spoke of the people whom you would meet; he spoke of how to handle those people. I think most of you neglect the financial side, most of you fail to see where the dollars and cents come in; most of you fail on the score of feeling that that is good enough; there never was anything good enough. Millet, when he painted his picture which set the world on fire, those potato gatherers waiting in the growing twilight for the bells of the angelus to ring across the fields, said, "Oh! If I might only have that picture again to paint it over!" And yet it sold for $115,000, and you could carry it under your arm! Now, you must never be satisfied with what you have done. Satisfy your people always; do everything that is possible to please, and take care of your picture and your customers; but within yourself set your ideal so high above all that you have already done that you, in striving to reach it, are bound to win the praise of others, and to deserve it. Study your people if possible when they come in; don't take them out and seat them at once for a picture. I remember the remark made by an artist who said that when he went to have a photograph taken it gave him the "shivers," because they always seated him on a chair and clamped two cold clammy things up to the sides of his head, and it made him shiver through and through! That is not necessary to-day. You can catch the expression of your sitters without doing that; you can avoid giving them the "shivers," and catch them as they come; but first you must understand them. You meet people, and you don't like them at first; you say, "I don't like that man." By and by you learn to know him better, and you do like him; and usually those are the firmest friendships that begin just that way. Try to take your sitters and get in touch with them. Let me tell you of two young men who both clerked in the same store; both were of equal intelligence, bright in looks and dressed well. One Saturday night they both started out from Cincinnati to a country place to spend Sunday, and come back on Monday. Charley was cold-blooded and calculating; and while he met people, and they

were free with him, genial and pleasant and cordial; yet Harry saw everybody and talked with everybody; so next Monday the two came back to their accustomed routine, and the following Tuesday the old farmer whom they had visited came into the store. Harry at once went up to him with a "How d'ye do; how is your wife, and the young man we met at dinner—I cannot call his name now," etc. He at once put himself in touch with the old man; the result was that that farmer ever after would pass by Charley with a civil "How do you do?" But he always had Harry to wait on him, and Charley never could understand why the old man didn't take to him. There are a good many of you people who are too busy to take care of your customers. I heard a story out West while I was gone away of a certain young man going into a gallery out there, and the proprietor was too busy to see him; the lady in the reception-room took in word that a gentleman was in waiting, and returned with the message that the proprietor was too busy to see the gentleman then. The caller went out, and never came back. That is the greatest blunder in the world. Little things that you do in your galleries, in your studios, in your workshop, are the things that make you friends; they are the things that count. It is the dollars that you don't see that come into your pocket by and by. Treat all your people as though they were the only customers you had. Make them feel at once that everything depends on their patronage, and not that you simply bring them out, and take them before the camera, take out the bung, and take their picture, and tell them to come to-morrow for it [the speaker here accompanied his words with a pantomime that brought down the house]—or day after to-morrow, as some of my audience suggests, and then give them anything you have got, and make them take it and make them feel that it is the best. Be lavish with your plates and stingy with your paper; that is, don't be afraid to use enough plates to secure a good negative; then be stingy enough with your paper to print only from the best negatives you can secure. By all means get in touch with the people; make them feel that their interest is yours, and that you wish to make pictures of them that will speak, that are the best that can be made. Make up your mind that you will be the best photographer in your city, that you are going to lead, that you are going to demand and obtain the best prices for the best work. Be honest with yourself; demand of yourself the best that is in you. Measure the work of other people at the true value, and give to the people an equal value always—or better! I thank you. (Applause.) The applause continuing the speaker continued:

I cannot tell you how much I appreciate the applause you have given me. A sermon an hour long is a very long one you know; and an hour and ten minutes is still worse. I was born and raised a Quaker on one side of the house, and a Presbyterian on the other. If any of you have ever gone through such an ordeal in your childhood you will appreciate the situation. (Laughter.) To make it worse, I lived most of my younger days part of the time with one grandfather, and part of the time with another; when I was with my Presbyterian grandparent we went to church at 10 o'clock Sunday morning, and the old people came at 11.00 and brought us lunch, and we stayed until 2.00 We never read anything but *Pilgrim's Progress* and books of that kind—*Baxter's Saints' Rest*, etc. Sunday was a day we dreaded. There I was taught to say, "Yes, sir," "No, sir," and "Mrs." and "Mr." I would stay there four or five months, and then I would go to my Quaker grandparents; and when I would say "Mister" So and So. I was told I must not say that, say "Isaac," or "Mary." "Thee must not use anything but plain language." If I sat at the table and they asked me anything, or offered me food, and I said, "Thank you," they would tell me, "Thank nobody but the Lord!" (Laughter.) We went to church on Sunday into a room as bare of all kinds of ornament as the back of your hand, not a picture, not a decoration of any sort, because that would be sacrilege; and worst of all, the women and girls went down one side, and the men and boys on the other; and there we sat two whole hours at a stretch waiting for the spirit to move somebody to say something! And then we all got up and filed meekly out; and the birds never sang so sweet, and the trees never looked so green, and the sky never looked so blue; and I swore by the Eternal that if I ever got big enough to be my own master I would never go to church. (Laughter.)

Now, I thank God I do go sometimes when there is good preaching and good music; but I lack manners, because I don't know which is right to say, "Yes, sir," and "No, sir," or to thank you, or sometimes to do the right thing in the right place. To-morrow, or Friday, I believe, I am down again, and then I will try to do the right thing in the right place. (Applause.)

President Stein: I want to make an announcement, that this afternoon at 3 o'clock we are to meet at the Layton Art Gallery, which is just one block north of the Pfister Hotel. The curator of the art gallery, Prof. Edwin C. Eldredge, will lecture on the works of art there. Some of them are famous masterpieces, and I think it will be a treat for you to be there. This evening we will attend a concert at the Deutscher Club, which is at the head of Grand Avenue. Your buttons will admit you. (Applause.)

On motion the meeting then adjourned until 10 A.M. Thursday.

THIRD DAY—THURSDAY.

The convention was called to order by President Stein at 10.30, who announced that, as he understood there were no committees ready to report at that time, the first thing in order would be the selection of a place for holding the next convention.

The Secretary then read the following communications:

HOTEL VICTORY,
Put-in-Bay, Ohio.

J. GEORGE NUSSBAUMER,
Sec'y P. A. of A., Milwaukee.

DEAR SIR: Hotel Victory, Put-in-Bay Island, Lake Erie, hereby extends a cordial invitation to your Association to hold their next convention at Put-in-Bay Island. We have a finely appointed hotel, capable of accommodating 1200 guests. We have room to display all of your exhibits and for manufacturers' display, a large hall for official meetings, and some smaller rooms for the use of committee meetings, etc. All of this space we offer free. We will make

you a rate of from $2 to $4.50 per day, according to location of room. We have a fine orchestra, which is at your disposal Hotel Victory is situated on a headland two hundred feet above the lake level, amidst some of the finest scenery that can be found along the lakes. We have private bathing beach, golf links, and many other forms of recreation.

Believing that we can offer you better advantages than can be found elsewhere, we submit this to your body with the hope that it will receive favorable consideration,

I am, very truly, yours,
T. W. McCREARY,
Manager Hotel Victory.

SAN FRANCISCO, Cal.,
July 24, 1900.

J. GEORGE NUSSBAUMER,
Sec'y P. A. of A., Milwaukee.

The Pacific Coast Photo Dealers' Association extends an earnest invitation to the Photographers' Association of America to hold their next annual convention in San Francisco. A hearty welcome, a fine climate, sparkling wines, and good cheer assured.

GEO. H. HAHN,
President.
L. D. HICKS,
Secretary.

TORONTO, ONTARIO,
July 25, 1900.

S. L. STEIN,
President P. A. of A., Milwaukee.

Commissioner of Customs says exhibits for Photographic Convention can be displayed under warehouse entry without duty, the same as in the case of other exhibitions. Toronto will be pleased to have the convention for next year.

E. A. MACDONALD,
Mayor.

DETROIT, MICH.,
July 25, 1900.

S. L. STEIN,
President P. A. of A., Milwaukee.

The city of Detroit joins heartily with the local members of your Association in an invitation to hold your next annual meeting in Detroit.

W. C. MARBURY,
Mayor.

DETROIT, MICH.,
July 25, 1900.

S. L. STEIN,
President P. A. of A., Milwaukee.

Detroit Chamber of Commerce and Conventional League at a special meeting, called to-day, unanimously voted to extend to the National Photographers' Association a pressing invitation to hold their next meeting in Detroit, the convention city of the world. Detroit has a reputation to sustain as a convention city, and this organization promises that the Photographers' meeting in 1901 will exceed the expectation of the oldest delegate.

WALSH,
Secretary.

(A voice: "What's the matter with Milwaukee? She's all right!")

President Stein: We are ready for nominations as to place of holding next meeting.

Mr. Taube: Mr. President, I place in nomination the city of Detroit for the next exhibition and meeting of this Association.

The nomination was seconded and stated by the Chair.

Mr. Griffin: I move that nominations be closed.

President Stein: Looks like a "put-up job." (Laughter.) Does that meet with a second?

(A voice: Where is that man from Buffalo?)

Mr. I. Benjamin: We would like to hear more about Detroit; would not Professor Griffiths get up and tell us something? (Applause.)

MR. A. H. GRIFFITHS: GENTLEMEN—Three hundred years ago a little band of missionaries and some fishermen came up the St. Lawrence and through the lakes until they finally reached that most magnificent of all inland rivers. The old chronicles tell us that as they glided along by the banks of this wonderfully beautiful river and the islands that have since become historic, the birds rose and flapped their wings in the morning sunlight, and they said that under nature's canopy they had found no place so beautiful since they had left the sunny land of France. They came on to a little inlet near where our Michigan Central Depot is to-day, and there they found the Indians camped about a rude stone figure, which they called their Manitou or god. The Catholics, in their zeal of religious fervor, felt that this was sacrilege; they tore down this stone god, broke into fragments, and scattered it along the shores, and erected the cross and the white flag of Louis to mark the spot. At midnight the Indians collected along the shore, reverently gathered up each fragment of this great rock god, placed all in their canoes, and carried it up to our Belle Isle, and there implored the god Manitou to turn each fragment into a snake, that all might defend the island from the whites forever. They named the island "Man-a-sha-bee"—the "Swan." That was the beginning of Detroit.

Two hundred years ago, at this time, in this month, 1701, Cadillac, with a party of Frenchmen, landed again at this same place and built a stockade and forts and laid out the little city of Detroit. He called it "Ville de Troit"—the village of the Straits, or city of the Straits, as we call it to-day. From that has come the name. It has become a nucleus of a city. Here were withstood the sieges of the Indians under Pontiac, and here were undergone all the trials and tribulations of an early colony in the vast Western wilderness, until in 1805 it had spread outside of the stockade; and then, through a great misfortune, as it was then thought, though we now know it to have been a great stroke of luck, the entire city was wiped out by fire. The public citizens of that day sent to Washington for L'Enfant, the great French engineer who had laid out Washington City, and he laid out Detroit in the newer and more beautiful way. He gave us the city we have to-day, with its magnificent broad avenues, well-paved streets (always kept clean); a city which all the people who visit it say is the most beautiful city in all the world.

You know, if you went to San Francisco, you would be most elegantly entertained; the great, generous heart of the West opens up to its visitors, and you would be magnificently taken care of, as I was, at San Francisco; but San Francisco is a long way off. If you should go to anyone of the other points named you

would be well taken care of. As for Milwaukee, what can I say? You have been taken care of in every way that you could ask for, and I doubt very much whether there is any other city in the world—in the United States, at any rate—that will treat you more grandly than you have been treated here. (Applause.)

But next year we will celebrate at Detroit the two hundredth anniversary of the city's birth, in this month of July. We have a magnificent water-way, in which a vessel floats as easily as if suspended in midair; our water is pure and clean and beautifully blue; our streets are broad enough for you people to have your own way in them (laughter); you may parade, or take the whole sidewalk—the street if you wish to. We will take care of you, carry you up to Little Venice, that place made famous all over this country because of its likeness to that Venice under foreign skies, that pride of the sea across the water. You will be entertained in a manner which, I believe, will please you. The Chamber of Commerce has said so; our Mayor has said so, and you will find him a man as broad in his ideas as he is in his body. (Applause.) Now, those people hold those inducements out to you. If you are afraid of getting seasick don't go on the water; we will put you on a trolley car and send you out to Mt. Clemens, and you may have a bath—if you need it—or you may go out to the lake, where they don't get seasick, and sail there in your sail-boats.

If you come to Detroit, I promise you on behalf of the photographers that we will use every effort to make the year 1901 the best, as this has been up to the present time, of all the conventions you have ever attended, and I want to see everyone who is connected in any way with the profession there, and I will do my little part of the great deal that will be done for you. Boston claims to be the "Hub of the Universe," and I agree with them. I am willing that they should be given that position; but if you don't believe that Detroit is the centre of the world come out and stand in one of our streets and look straight out. (Laughter.)

(Cries of "Question! Question!")

President Stein: It has been moved and seconded that nominations for place of next convention be closed. Are there any further remarks?

There being none, the question was put and carried.

The Chair announced that nominations were closed, and put the question on the selection of Detroit as the next place of meeting, when everybody stood up, and, with three cheers from the assembly, the Chair announced that Detroit had been selected.

Such was the excitement and evident wish of the convention that the President quite forgot to put the question in the negative, and ex-President Guerin facetiously asked if the Chair was sure of the result of the vote. [Laughter.]

President Stein: We have next in order to hear the report of the Nominating Committee. I would like to ask one of the ex-Presidents what has been customary in this particular, whether they have always read the whole report of the Nominating Committee, or is it usual to read separately the nominations presented by the committee as to each officer and act upon one office at a time before hearing the names nominated by the committee for the remaining office or offices? As to the mode, in that I am in doubt.

Mr. Guerin: Mr. President, you will find that of the candidates we have selected more than one for several of the offices, so you cannot elect them in a body by one vote.

President Stein: That is not what I meant. We don't intend to do that. Will the Secretary please read the report of the Nominating Committee?

The Secretary read the following

Report of the Nominating Committee.

To the P. A. of A.:

Your committee report the following nominations, viz.:

For President: E. B. Core, of New York City.

For First Vice President: George M. Edmondson, Cleveland; David Rosser, Pittsburg, Pa.

For Second Vice-President: Joseph Knaffl, Knoxville, Tenn.; Charles Rosevear, Toronto, Canada.

For Secretary: Charles Heath, Grand Rapids, Mich.; E. E. Seavy, Newcastle, Pa.

Respectfully submitted.

DUDLEY HOYT,
Chairman,
F. W. GUERIN.
WILL H. MOSES.
F. G. SCHUMACHER.
GEORGE W. VARNEY.

R. P. Bellsmith: There being no other nominations, I move that Mr. E. B. Core, of New York, be declared the President of this Association for the year 1901. Seconded. The President put the question, and it carried; and the result was so announced.

President Stein announced again the names of candidates as reported by the Nominating Committee for First Vice-

(*Continued on page 361.*)

GLIMPSES OF NEWFOUNDLAND

BY S. H. PARSONS, ST. JOHN'S, N. F.

A GROUP OF CARIBOU.

A SNAP IN SUNSHINE.

Copyrighted, 1899, by S. H. Parsons.

It is good where life becomes strenuous to change the current of one's thoughts for a while, and let things drift until the mind has rested. And convention week was certainly a strenuous time, as all who were at Milwaukee will agree. In other pages we reproduce the stenographic record of that eventful week, a stirring chapter in the history of American photography. The printed record, however, lacks the sparkle and vim of life, and so we provide in this paper a change of thought which will doubtless be as welcome to our readers as to ourselves.

Once a year, about convention time, there comes to our table a bulky letter and bulkier package bearing the Newfoundland postmark. Their arrival tells us that a distant coworker who would fain attend the convention, but cannot come so far, has reached home after his annual holiday, and desires to share with us the first fruits of his pleasure trip. The delightful views of Newfoundland, here engraved, are chosen from among these first fruits, and they are the work of an old friend, Mr. S. H. Parsons, of St. John's. We quote from his letter:

"Doubtless some of your readers who have attempted to photograph animals in their native haunts will be interested in a few particulars concerning these deer pictures. Deer stalking with the camera is a work of patience, and unless one is stocked with a plentiful supply of the same he had better not undertake anything of the kind, or if he does he might, at the beginning, write *failure* in big letters. The rifle is a much easier instrument, and one that there is generally more success with; at least that is one of my experiences.

"These pictures of caribou I send you were made under difficulties that could only happen *once* to a professional. It requires one trip, or a season, to get thoroughly posted, and that is what is chiefly required to work successfully under such conditions. In my case I had a stand camera, whole plates, with Euryscope lens, and a Thornton-Pickard shutter. It is necessary to have a stand camera, but it is equally necessary to have a good hand camera. I should have had twin-lens, box 5 x 7, with daylight films, strapped to the body, ready for immediate use.

"My pictures were made mostly with

the back lens of a Voigtlander *Euryscope*, about 17-inch focus at f/8. I had to use this as a *Telephoto* in order to get the figures of the animals as large as possible. In the short, dull days of October and November, with a poor light and such a long focus, exposure is necessarily slow. I used a Thornton-Pickard shutter, just as slow a movement as I could work it without being considered a *time* exposure. The young stag was standing—(I shouted to him to *halt!*) and he did so, beautifully. After making the exposure I raised the rifle and covered him, but the thought struck me that it was too bad to take his *photograph* and his *life* as well, so I put down the gun and let him go his way. In the picture of the 'group of caribou' they were all moving. A train was passing in the distance, and the whole herd was frightened and in confusion—there were something like twenty in it. So, rather than run the risk of not

SALMON AND TROUT FISHING ON RIVER AND LAKE.
From Photographs by S. H. Parsons, St. John's, N.F.

getting any pictures, I took what I could get, but would have done better had I got them on the centre of the plate. I had no finder of any kind. When I go out next season I shall have a Ross-Goerz lens, a first-class shutter, a good finder, and the most rapid, reliable plate I can find; also a twin-lens, 5 x 7 camera for daylight films —one that I can always have strapped round my neck and shoulders. The twin-lens is preferable, as you can see the full-size picture you are making, and you are sure to have your figure right on your plate. A whole plate stand camera is

PROFESSIONAL PORTRAITS BY NADAR, PARIS.

NADAR, PARIS.

necessary, for an ambush can always be found on some good *lead* where the deer are sure to pass, if the necessary patience is at hand to *wait and watch*. But it is trying to one's perseverance to stand upon about a square-yard of ground from 9.30 in the morning till 4.30 or 5 in the afternoon (*and no dinner*), and a lot of *wild shooting* going on all round you. I did not mind the *Winchesters*, but the *Lee-Metford* and *Savage* rifles, that kill at one mile or more, were particularly trying to one's nerves, especially when a stray bul let would whistle uncomfortably near. I stood this for five days, but at last it got so hot I had to get out and make a new stand in a less dangerous neighborhood.

"I love angling, and the fishing pictures are of special interest to me, but the taking of the photographs is tame compared to that of deer taking. As far as the real sport is concerned, I would rather *land* one ten or eighteen-pound salmon than I would shoot twenty caribou. It looks so much to me like shooting a domestic animal. I have always felt pangs of remorse when I have taken the life of one of these noble animals. I would rather photograph them at any time. Had I been out to *kill* I could have had my fill of it, and very choice animals; but I can assure you it is much easier to *shoot* them with the rifle than it is with the camera. On the other hand, I have not a qualm of conscience in capturing a salmon or trout, and I have captured quite a quantity time after time.

"The rest of the views are all made along the line of the Newfoundland Railway and the Humber River, and simply show how attractive out-door life is here, whether one carries rod, or gun, or camera.

"It is truly a sportsman's paradise, and a long life here, spent behind the camera, only leaves me more in love with the island year by year."

We wish it were possible to show our readers *all* the pictures sent by Mr. Parsons. They make an inspiring collection, and bear eloquent testimony to his skill as a photographer and his alertness in the field. Our engravings show the famous Codray Valley, the Cape Ray Mountains, the Log Cabin at Spruce River, and various bits along the Humber River. The "Snap in Sunshine" gives an excellent portrait of Mr. Parsons, and the "Group of Caribou" is the picture mentioned in his letter above.

Being this far abroad, we will go across the Atlantic and see what Parisian photographers are doing. The twenty-six examples of professional portraiture from the famous studio of Nadar well repay the trip. They offer many new suggestions in pose and general treatment of the subject, and were chosen for reproduction by M.

NADAR, PARIS.

Nadar, *fils*, himself, as representative of the work of the studio.

PORTRAITS BY F. ERNST ZIMMERMANN,
successor to the Ritz Art Studio, Boston.

Returning to things and photographs American we bring from a Boston studio a few choice examples of the work of Mr. F. E. Zimmermann, who has succeeded to the Ritz Art Studio of that city. Their good qualities are evident.

IN NATURAL COLORS.

BY JAMES F. RYDER.

PORTRAIT: BY CH. CHAPLIN.

In the year 1850 the daguerreotypists of the country heard the announcement of the discovery of taking natural colors on daguerreotypes.

The Reverend L. L. Hill, of Westhill, N. Y., was the fortunate discoverer. The color of eyes, hair, cheeks, lips and general complexion, as well as the colors of bright ribbons and gay dresses, were said to be taken in a very perfect manner.

The discovery was an astonishment to daguerreotype men and of much interest to the general public.

The prominent practitioners of daguerreotype of the principal cities made pilgrimage to Westhill, were much pleased with the "pictures in natural colors," and made tempting offers for the secret of the method of producing them; but the reverend gentleman would not sell, neither would he allow any practitioner to carry a picture away or take it from under the glass which covered it for examination.

He preached upon the Sabbath, and may have held prayer meetings on Friday evenings, but sure it was he gathered in many a dollar through the week for the *Hillotype Miniature*, that being the name of the new picture. Every likeness leaving his hands was carefully sealed from observa-

tion of picture men. And all purchasers were cautioned against allowing any commonplace picturetaker to examine them.

He just about paralyzed the business for others. People were waiting for the pictures in natural colors.

Hard criticisms were issued by the sinful daguerreotype man of small respect for "the cloth." "That fellow had better keep to his preaching," they said, "and let picture taking alone."

The practice with men of the camera in those days was, when the picture was finished and ready for the case, to apply prepared dry color with a camel's hair pencil to the surface of the plate, to such parts as cheeks, lips, etc., where color was required, but the highly polished surface of the plate did not satisfactorily receive it, and it could not forcibly be made to adhere. The anticipated coming of the Hillotype was much desired by picture men.

Now the craft throughout the country received circulars announcing the publication of a book by the Reverend L. L. Hill, giving the history and practice of the daguerreotype, valuable formulæ and methods to be given complete. The most startling feature of the coming work was that full and complete instructions were to be given for the production of the Hillotype. The price of the book was five dollars by mail, postpaid. No book would be mailed until the entire edition was subscribed for. The money to accompany the order, of course.

Those who ordered first would receive the book first, as all would be mailed in regular list order, "first come, first served." Well! we all tumbled over each other at the doors of the post offices to get our money in first.

I got my book in due time and rushed for the chapter on *Hillotype* the first thing, holding my breath the while. I learned on reading that after our daguerreotype was finished and ready for the case we should flow it with a thin wash of fine transparent glue dissolved in distilled water. This, on drying, would give the surface "a tooth" or slightly sticky quality to which the dry color, applied as usual, with a camel's hair pencil, would adhere, as it would not to the highly polished surface of the plate.

Well! I was the owner of the Hillotype process. I felt that the reverend proprietor had given me as smooth a sell as I could have received from an accomplished horse jockey in a "swap." I don't remember ever announcing, by advertisement or otherwise, the Hillotype as one of my possessions. I do not recall an instance of any daguerreotype man making a claim to ownership of that wonderful improvement to our young art. I fancy they felt it "was one on *them*" and they did not care to parade the fact. If the reverend gentleman be still on earth he doubtless takes an occasional laugh up his sanctimonious sleeve in recalling the "easy scoop he took on the boys." He surely is entitled to credit of establishing the habit of discovering natural colors in photographs. As often as every two or three years since we have had new announcements of this discovery, which, as a matter of fact, is yet to be perfected.

The usual new discoverer is a Parisian scientist—and the discovery made after patient research, or accidentally stumbled upon, though it happens occasionally that a discoverer crops up at Oshkosh or otherwise. These discovery announcements are doubtless gratifying to the persons whose names are associated with them, but they are misleading, because not true.

Methods have been discovered by which from repeated printings from different plates—a means partly photographic and partly mechanical—color is given, and some subjects, like fruits and flowers, are made to look very natural, but are not absolutely correct. Color may be given by reflection and transmission of light through colored media, the results of which are in some cases beautiful and are a delight to the eye.

These methods are ingenious, and while by their means a photograph may *seem* to be in natural colors, it is not. The foundation is a plain gray photograph of light and shade, or black and white, invested with color by an ingenious device.

A person is not red, green or blue because seen through glasses of those colors. The desire to attain wonderful results stimulates effort at invention and discovery. When the real cannot be compassed, a semblance must be accepted. The Indian whose ambition was to walk over the rainbow had to be content with walking under it.

Birds of the air navigate space above the earth—they rest at anchor in the blue, they sail lazily about, they take a sudden lurch and dive, they tack, they make into the wind, they run before it, out to sea they go, and are lost to view. It seems quite simple. The Creator of all made it possible. The ingenuity of man has not yet devised or built a machine which has successfully rivalled the bird—though flying machines have become as plentiful as color methods in photography.

What I understand as NATURAL COLORS in photographs, the actuality of which would be a blessing to photography and photographers, would be that the colors *be born with and in the image* as it comes into existence from the camera or as it is lifted by the developer from seeming nothingness to a reality. An artificial pretence is not the real thing. A negro is in *natural color* from birth. A white man blackened up for a cake walk or a banjo solo is an imitation, a deception, a parallel instance to alleged natural colors in photographs, yet color discovery in photographs will doubtless go right on.

Thankful and appreciative for what has been given in devices for imparting color to monochromatic camera products, natural color in photographs is, I regret to say, NOT YET.

It was at Elyria that I received my book on how to make Hillotypes. That was before the advent of the gold brick.—From *Voigtlander and I*, a work in preparation.

PHOTOGRAPHING PAINTINGS.

EVERY photographer who is in any sense of the word "an all-round man," will at some time or another have some colored art object to copy—it may be a picture or some vase or plate or article of decoration. There are quite a number of points to be remembered in this work from the choosing of lens and plate to the development and printing. In rendering a colored object an orthochromatic plate is a first necessity. This plate will represent the colors more nearly as their luminosities appear to the eye than does the ordinary uncorrected plate. There is no special construction of camera necessary, rigidity, however, being very important. The lenses should be anastigmats or wide angles, giving great flatness of field. The great objection to the wide angle is its slowness, owing to the need for much stopping down. The lighting of the picture requires some consideration. For a lightly colored modern painting, especially water color, diffused daylight is often both best and most manageable. If lighting has to be by lamp the lamps will give a more even lighting, and less liability to reflections if they are placed (at least two of them) one on each side of the picture and fairly close to it. The usual plan is to let the light fall on the picture at too great an angle, standing the lamps close to the camera. For very dark pictures, especially old "seasoned" oil paintings, direct sunlight is almost a necessity. One of the most difficult things to copy is a miniature fixed behind a curved glass. E. Sanger Shepherd, in a lecture before the London Camera Club, gave a good point on the subject. Reflect the miniature into a black mirror. At a certain angle the light in the mirror becomes in part polarized, and so innocuous; the same result may be obtained by using a Nicol's prism in the lens.

Color screens are a necessity for this work, and their use is, unfortunately, often misunderstood. If there is too much of some strongly actinic color, a screen to "dilute" it gives the other colors a chance. Screens are usually of a red or yellow tinge, as the blue colors are the ones to be checked. It will be seen that intelligence may be exercised in selecting the right degree of density in a screen, and most practical workers facilitate this by making their own screens. The preparation of the screens is, with care, not difficult, always remembering that if one does not appear quite satisfactory it can be thrown away. Take an ordinary dry plate, unexposed, fix it well in freshly mixed and quite clean hypo, and wash it well. This will give a plate with a film of clear transparent gelatine. Soak this in a solution of dye, and the film should absorb an even stain. The longer the immersion the deeper the stain—try five minutes for a light tint. There are many colors whose names are well known to orthochromatic workers, and most of

them are prepared by simply mixing with water. In one or two cases colors insoluble in water may be used with alcohol. A few of the colors most used are napthol yellow, brilliant yellow, aurania, uranine, fuschin, brilliant green, phosphene, theosin, red chrysodin, and several blues and purples.

Exposure cannot well be suggested, it will vary so very widely. It should be amply sufficient, for a great bane of photographic reproductions is the way in which "luminous shadows" are killed to one dead black. For monochrome work, especially work in line, such as engravings, a small stop and a thickly-coated plate should be used. Sometimes a blue screen is advisable with old prints. Let exposure be ample and push development almost too far, reducing by a very brief immersion in a fairly strong solution of Farmer's ferricyanide and hypo reducer.

The best developer for this work is, perhaps, metol. Its advantage is that it brings up all the detail very rapidly, and density is simply a matter of time. A more slowly acting developer, acting first on the high-lights and gradually working into the shadows has the disadvantage that the reds do not begin to show until development has been pushed very far, and in most cases they do not get fully brought out.

A last point of interest is the light in the dark-room. It is well known that the ordinary red light is not always safe for plates rendered specially sensitive to red. Some expert workers go so far as to develop in the dark. It may be advisable to put the plate into the developer without letting the light strike it—this applies to all plates—but beyond that most workers would not care to go. The light may vary for different plates, but one of the safest is a threefold film of color recommended by Sanger Shepherd. Take a clean fixed plate and immerse in a solution of aurantia (in water). Another plate is stained with a similar solution of napthol yellow. These two are placed together and one of them is coated on its glass side with collodion stained with methyl violet, 6B. This shuts off all light except the very extreme red.

THE NATIONAL CONVENTION—OFFICIAL REPORT.

(*Continued from page 352.*)

President, and stated as there was more than one candidate the election would be by ballot, and named tellers to distribute, collect, and count the ballots.

In reply to an inquiry from Mr. Brady, of Orange, N. J., the Chair called for further nominations from the floor, if any present desired to make same.

Mr. Brady nominated Mr. George W. Varney, of Chicago.

Mr. J. W. Hughes nominated Mr. D. D. Spellman, of Detroit, Mich.

At this point a delegate rose and asked if the candidates, as their names were presented, would not be good enough to rise, so that the convention might size them up. [Laughter.]

Mr. C. P. McClean nominated Mr. Henry Doerr, of Louisville, Ky.

Mr. W. T. Ross nominated Mr. H. S. Klein, of Milwaukee, Wis.

A member suggested that at this rate there would be nobody left to do the voting, unless each candidate voted for himself, and moved that the nominations close. Carried.

The Chair read the names of candidates presented.

Mr. H. S. Klein withdrew his name as a candidate for First Vice-President.

Mr. Hughes: I would like to state as a fact, which people ought to know, that Mr. Spellman, being from Detroit, and as the convention is to go there next year, he is a man who stands first-class as a photographer throughout this country, and is recognized as one of our best men. I would like to especially commend him to this convention as a proper man for that position.

Mr. George W. Varney: I cannot serve and will not run as an officer, and wish to withdraw my name.

President Stein: Mr. Varney's name is withdrawn. The tellers will now proceed to do their duty, and report the result when found.

The vote was reported and announced by the Secretary, as follows:

Secretary Nussbaumer: There were 247 votes cast, distributed as follows: Spellman, 154; Edmondson, 81; Rosser, 7; Doerr, 5, electing Mr. Spellman, of Detroit, as First Vice-President for the ensuing year.

The Chair announced as next in order the election of Second Vice-President, and stated the names formally reported as candidates by the Nominating Committee; also announced that further nominations would be in order from the floor.

Mr. Ralph: The Nominating Committee have done their work in an acceptable manner, and have presented the names of gentlemen with whom I am not personally acquainted, but who, I have no doubt, will fill the office acceptably, either one of them, if elected, in an eminently satisfactory manner. I find, however, that there is a strong sentiment among members present to present the name of another young man for your consideration; he has proven himself a man of ability, both as an organizer and as a business man. If he meets with your approval you will find he will prove a hustler and an earnest worker, thoroughly fitted for his profession, and a man who possesses business ability to carry out whatever he undertakes. I present for your consideration for the office of Second Vice-President the name of Henry S. Klein, of Milwaukee. [Applause.]

Mr. Dozer: I second the nomination. It is our duty to place in charge of the affairs of our Association men who have proven themselves worthy in our profession. I think that in Mr. Klein we have a man who will fill the bill. I second this nomination.

On motion of Mr. Griffin, nominations closed.

President Stein announced the names of the candidates as proposed by the Nominating Committee and added to by the house, and directed the tellers to proceed with their duties.

Mr. W. H. Potter: I think, in justice to the South, we ought to vote for the gentleman from Knoxville, Tenn. (Applause.)

Secretary Nussbaumer: Whole number of votes cast, 203, distributed as follows: Knaffl, 61; Rosevear, 13; H. S. Klein, 129. Mr. Klein is therefore elected Second Vice-President for the ensuing year. (Applause.)

President Stein: The office of Secretary is to be voted upon now. Messrs. Charles Heath and E. E. Seavy are the names reported by the Nominating Committee. Are there any more?

Mr. ———: I would like to nominate our very efficient Secretary, who has served us so well the last year, Mr. Nussbaumer. I think it takes about a year to get well seasoned. Seconded.

Mr. Reeves: I wish to add a third second to that. I have had experience along that line in State association work. I know that the position is hard to fill; I also know that a man has only begun to learn when he has filled one term. Our present Secretary, Mr. Nussbaumer, has done his work well, and I believe it is the feeling of the Association that if he will accept the nomination and election that we want to elect him again. (Applause.)

Mr. Miller: I move that we make this nomination unanimous.

President Stein: That cannot be done. There are two others nominated who have not withdrawn.

Mr. Varney: Mr. President, I have had several years' experience on the Executive Board, and I found it necessary to have as officer some man that is strong. During our deliberations this morning we decided that Mr. Heath would fill that bill. I want to present Mr. Heath's claims before this Association as they should be.

(A voice: What's the matter with Nussbaumer? He's all right.)

President Stein: While you are preparing your ballots I wish to announce that we have postponed Professor Beck's lecture until to-morrow morning, it being now so late that it is not thought he would get proper attention at this hour, but we will open the meeting at 10 o'clock sharp tomorrow morning, as we have the awarding of prizes and two separate lectures by Professor Griffiths and Professor Beck, respectively.

A member: Which will come first?

President Stein: That I cannot say, it will be announced later.

A number of the delegates present being now about to leave, the President at once recalled them by a sharp rap of the gavel, and asked if all had deposited their ballots before leaving; thereupon he requested the audience to retain their seats and hear the result of the ballot for Secretary, which

was announced, as follows: Whole number of ballots cast, 142, distributed thus: Heath, 28; Seavy, 18; Nussbaumer, 96. Mr. J. George Nussbaumer is elected Secretary for the ensuing year.

Adjourned until Friday, July 27, at 10 A.M.

Presentation to President S. L. Stein.

A pleasing incident of the convention was the presentation in the club-room of the Pfister Hotel, on Thursday evening, to President S. L. Stein of a beautiful cut-glass punch-bowl filled with American Beauty roses.

Mr. A. J. Griffiths acted as master of ceremonies, and made the presentation speech in his usual happy style. He said: "Men sometimes are blamed for the good things they do, when they have tried to do their very best to serve others unselfishly. It may be your fortune to stand in this position, in view of the many things you have done to make the P. A. of A. Convention of 1900 a success, but should anything you have done or omitted to do bring you censure, you can still feel that you have done your very best, and you will have a consciousness of right that will comfort you. We, your friends, know that the success of the convention is largely due to your active and self-sacrificing labors, and we wish to present to you as a slight token of our appreciation this punch-bowl. Accept it in remembrance of those who have given it; but not the roses—they are not yours—they are meant for another whom we see present, Mrs. Stein. Perhaps she may claim the bowl, too; if so, you will, of course, lend it to her, but otherwise it belongs to you. Accept it with the kindest and best wishes of the true friends you find about you."

Mr. Stein was unable to express his feelings at the moment, but accepted the gift, and asked to be excused from a speech. He really thought it would belong to Mrs. Stein, anyway, for what was his was hers, and she ought to make part of the speech, if one was needed.

Mrs. Stein came gracefully to the rescue, and declared that she hoped she might have the pleasure to see the contents of the bowl emptied many times by the friends of Mr. Stein and herself. The little party then broke up and was lost in the crowd of photographers thronging the hotel.

FOURTH DAY—FRIDAY.

The convention was called to order at 10.30 A.M. by President Stein, who at once appointed a committee on resolutions of thanks to the Milwaukee press, etc. Professor O. W. Beck, of Cincinnati, was then introduced and gave the lecture on "Lighting," which follows in a condensed form. The lecture was illustrated by frequent refefence to diagrams and pictures, hence it cannot be presented in full. Substantially Professor Beck spoke as follows:

Lighting.

The illustrated section, demonstrating laws in modelling and picture construction, can only be touched upon. When speaking the day before yesterday on the principles that underly art, I spoke of all that was obtainable by simple, straight photography. Photography now has a technical equipment which is capable of producing art, and interpreting what the individual has to say. What is it, then, that keeps the average photographic output at such a commonplace level? It is simply that photographers, as a whole, are only on the brink of the art world. They have yet to learn its language—the language that is in line—its length, its thickness; the language that is in mass, and the inter-relation of mass and line. Further, the language of the modelled form, and that of the flat surface; again, that of tone and of color. The whole world of art lies before you, and is a most wonderful world, full of delight—the very realm of the beautiful. But before we can enter this world of art we must accept that its *portal* is *study*, and that we must go to the real masters to-day as art students sought them in the past. We must get at the thing itself, and must learn to throw off our narrow prejudices. For instance, there is an insistence to-day to make *art in photography* entirely dependent upon lighting; and then there is lauded throughout the land a system of lighting that, while it is in vogue, is a measure of excellence for all photographers.

Now, ladies and gentlemen, lighting is a useful tool, but it is only an infinitesimal part of the number of elements that go to make up a picture. My experience in photography is this: that if the photographer only knew how to lead the mind of the one looking at his picture to the cherished point of interest, his lighting would not give him so much trouble. More than that, if the operator of the camera only knew what "movement" in a picture meant, he would make his lighting *serve* him, in place of being controlled and worried by the system of lighting in vogue. And, finally, if the photographer only knew what to do with his background, making it right for each new sitter, his lighting would be but a plaything to him. Do not forget, gentlemen, please, that a picture begins *not* with the face of the sitter upon which a certain light is thrown, but it begins with that part you usually form by your scissors—the four boundary lines, or the oval of the picture plane. From these the picture gets its character and force, and from these you must learn to lead the mind inward to the desired point, and hold it there. I know that is a new way for you to look at art study, but since art has arrived in photography it is a fact that we cannot escape.

As at present conceived, lighting in a vague way is the endeavor on the part of the photographer to secure the modelling of the head, and he hopes that he will at some time get picturesque effects in the *ensemble* of the picture. The first conception that good lighting of the head brings about modelling is correct; while the second, the hope that such modelling will secure the picturesque *ensemble* of the picture, is erroneous. I think that the study of lighting is practically confounded with the study of the management of the prime elements that I explained in in my former lecture. Take these two examples, for instance; they have the system of lighting very much alike. One is a painting by Van Dyke, and the other a modern photograph; both have a good deal of modelling, and are plastic in the head. Is the painting satisfactory? Yes. Is the photograph satisfactory? No. Why? The painting attains to actual portraiture, while the photograph remains only a commonplace likeness. Why is this? What is the reason? Well, first of all, the face in the painting has a good light upon it to make it firm, both as a form and as a light spot. If the average photographer had done this much he would say: "That much accomplished is very good; it models well, it looks like the sitter, and the head is plain and can be well seen. I do not know very much about the rest of the picture, whether I should make it three-quarter length, full-length, or only a bust. Frankly, I don't know, and I hope that in any case it will look all right.

The painter reasons quite otherwise: "This lighted head is so forceful, so intense in its concentration of interest that it must spread its influence over surface until it finds its balance." Thus, the man's coat is found to be black, and a half-tone background would be useful to relieve the coat as well as the face. We will see how much the head can stand of these. We find that it balances when we make the figure down to just below the hand. Now, it is necessary to introduce a second strong light somewhere in the lower portion of the picture; thus we put in a strongly illuminated hand, and at once the head "feels" better; its over-accentuation is gone, and a balance has been approached; our eyes are led into the picture from below to the hand; our interest is led upward by the climbing lines of the arms to the head, and by this treatment we find we have expressed more than mere likeness—we have much of the man; it is more of a portrait.

Does that not prove to you that a picture depends upon more things than a well-lighted head? Now, for instance, this picture could be ruined, even yet, if this gold braid on the seam of the coat were allowed to make that parallel descent from the head to the lower edge of the picture. That is an influence for evil which must be counteracted; therefore, the artist places a gloved hand so as to overcut it, and thereby draws the interest back to the head circlewise. Does that not again prove to you that lighting by itself does not insure art, but that it is only one of the innumerable factors that go to make up a picture?

After this exposition the laws that underlie "modelling" were explained from illustrations. The various systems of lighting were all taken in turn. After that followed a criticism on a modern English portrait photograph, showing where it lacked proper lighting to make it model. Mr. Inglis' system was analyzed, and it was found that, although it confined itself to only one system, that its serious study was to be recommended to all in the profession. One example was found to be an excellent portrait in every way, and the light so thrown upon the face that we fairly looked into his eyes; moreover, that there was a feeling of his, the sitter's, bodily firmness—in fact, of his reality. There were a few shortcomings pointed out in two more examples, and then a Rembrandt followed, where a very unusual *lighting* effect was explained in order to show that any kind of lighting is good, so long as the rest of the picture supports the theme of light. The question whether lighting insures the portraying of character was next proven to be untrue. Then followed two pictures in which was demonstrated clearly that, even though the lighting is insufficient, the treatment of the background can often make it satisfactory.

The subjects of "tone" and "atmosphere" were elucidated by an explanation of what constitutes the difference between decorative art and realistic art. Finally, the subject of "values" was touched upon in a way to show that to get them was practically three-fourths of the art-problem in photography.

The lecture closed with an explanation of the merits of some of the photography in the exhibition.

President Stein: Next in order is the reading of the awards made by the judges, Messrs. M. J. Steffens, of Chicago; J. C. Strauss, of St. Louis, and F. M. Somers, of Cincinnati. This list was then read as follows:

List of Awards of Prizes.

Grand Portrait Class. 1st prize. Moore & Stephenson, Atlanta, Ga.; life-size figure bust. 2d. Dudley Hoyt, Rochester, N. Y.; gold medal. 3d. J. E. Giffin, Wheeling, W. Va.; silver medal. 4th. E. C. Dinturff, Syracuse, N. Y.; bronze medal.

Genre Class. 1st prize. E. S. Curtiss, Seattle, Wash.; figure head. 2d. G. Moses & Son, New Orleans, La.; gold medal. 3d. Baker Art Gallery, Columbus, O.; silver medal.

Miniature Class. 1st prize. I. Benjamin, Cincinnati, O.; gold medal. 2d. D. Rosser, Pittsburg, Pa.; silver medal. 3d. Dudley Hoyt, Rochester, N. Y.; bronze medal. 4th. G. Moses & Son, New Orleans, La.; diploma.

Class A. 1st prize. Elias Goldensky, Philadelphia, Pa.; gold medal. 2d. A. F. Proctor, Huntington, W. Va.; silver medal. 3d. W. M. Morrison, Chicago, Ill.; bronze medal. 4th. E. S. Curtiss, Seattle, Wash.; diploma.

Class B. 1st prize. E. E. Dexter, McKeesport, Pa.; silver medal. 2d. A. F. Proctor, Huntington, W. Va.; bronze medal. 3d. C. S. Bateham, Norwalk, O.; diploma.

Class C. 1st prize. Louis Schreiber, West Bend, Wis.; silver medal. 2d. J. F. Denninger, Neenah, Wis.; bronze

medal. 3d. A. L. Jackson, Tacoma, Wash.; diploma.

Landscape Class. 1st prize. H. C. Myers, Boise, Idaho; silver medal. 2d. J. H. Field, Berlin, Wis.; bronze medal. 3d. Robert Wilkinson, Montpelier, Vt.; diploma.

Marine Class. 1st prize. Charles E. Bolles, Brooklyn, N. Y.; silver medal. 2d. H. R. Fitch, San Diego, Cal.; bronze medal. H. H. Morrison, Seattle, Wash.; diploma.

Mr. W. H. Moses: Mr. Van Norman's name was not mentioned in the list of awards. His pictures came too late to mention; but I consider them as artistic, if not the most artistic pictures displayed in the hall; and if it is agreeable to the members I would make a motion that he be awarded some special trophy commensurate with their merit. (Applause.)

Motion seconded by Mr. I. Benjamin, of Cincinnati.

President Stein: It is moved and seconded that some special award be given Mr. George H. Van Norman, for his display. It is proper to explain that he intended to have his pictures get here in time, and I supposed they were here, but they did not arrive until last Monday, after the pictures had been judged; in accordance with the rules for entering pictures we had to rule him out of the contest, the same as we would any other late comer. The pictures were not here on the last day of grace, and we could not make any exception. Are you ready for the question? What should this award be? (A voice: some trophy.)

The question was put and carried. The Chair directed the Secretary to make a minute of the vote.

President Stein: There will have to be quite a bit of preliminary work done at our next place of meeting, owing to the fact that there are no officers resident there; and as the present officers hold over until January next, I think I will appoint as acting officer in Detroit Mr. Clarence M. Hayes, to take charge of our affairs there. (Applause.) He will see to it that proper quarters are secured. Perhaps you can get a hall like this without paying for it. (Applause.) Let him attend to all that. Of course, when the new Executive Committee meets in January next that ends his duties; they will take charge then.

We will now hear the report of the Committee on Resolutions.

Mr. W. I. Scandlin, editor of *Anthony's Photographic Bulletin*, New York, as Chairman of the Committee on Resolutions, submitted the following:

Report of Committee on Resolutions.

To the P. A. of A.:

The committee appointed by you this morning to recognize the courtesy received at the hands of the citizens and others of Milwaukee beg to report as follows, to-wit:

WHEREAS, The Photographers' Association of America, at its Twentieth Annual Convention, has received at the hands of the press and the business interests, and citizens of Milwaukee, most cordial welcome and a hospitable reception, and a succession of courtesies which have added to the enjoyment of the Convention; therefore, be it

Resolved, That the thanks of this Association be extended to the Mayor of the city of Milwaukee for his cordial greeting, to the Citizens' Business League, and to the daily press and citizens of Milwaukee for the many courtesies received at their hands.

W. I. SCANDLIN, Chairman,
GEO. W. GILSON,
F. D. TODD,
MRS. FITZGIBBON CLARK.

President Stein: The resolutions are before you; what is your pleasure?

Mr. Seavy: I move that we adopt the resolutions, and that they be spread upon the minutes.

The motion was seconded, and a rising vote called for. The entire house rose, and the Chair declared the resolutions unanimously adopted.

After announcing that the excursion on the Crosby line of steamers would leave at 2.30 P.M., the Chair introduced Prof. A. H. Griffiths, who spoke as follows:

Address by Prof. A. H. Griffiths.

I don't quite like to be placed in this position. You have had this morning a very delightful talk on the rules and technicalities of art from a gentleman who stands so high in the profession that he needs no words of mine. He was followed by the awarding of prizes, which, of course, interests and distracts the

attention of everybody, because naturally you wish to know the winners. Under such circumstances I feel handicapped. I agree perfectly with my friend, Mr. Beck, in all the technical details that he gave you in regard to pictures. It is what I have been trying to preach to you; and I wish you would read more and look more, and study more, and learn to know the people that come to you; but for Heaven's sake, don't fill your heads so full of rules that your work will be done with a straight edge.

I think sometimes of the boy of whom I told you that I saw in a store a few months ago, who when he wrote a letter to his best girl would write it out on a piece of wrapping paper first, then cross it out and correct it, and put in the proper grammatical construction, all the periods, the commas, the semicolons; then he would take another piece of paper, and a fine pen, and would most elaborately and beautifully write it, and send it off to the girl. (Laughter.) I would not give you a nickel for 5000 such letters, with all the soul and heart swept out of them; I would rather have a letter with a word crossed out now and then, but reflecting the truth of nature in every line. Let it come from the heart, full of feeling and affection. (Applause.) And so when you make your pictures, make them with your best knowledge as to technique, with the best you know as to your chemicals, and your lenses, and your paper, and all that; then throw that all aside and put your soul into it, and make pictures that will live. (Applause.) That is art! No man ever took a ray of sunlight and threw it on a face, and painted it absolutely as he saw it, and made a picture.

It is true a man should copy nature; nature, you say, never goes wrong—if we understand her, she never does; but how few of you do know nature. Nature is the shyest of all the goddesses you have; you must woo her, make love to her, study her moods, catch her at her best, or else you fail. You talk about doing away with machinery! Why! How long is it since the day when every gallery was up a narrow stairway? How long since a packing-box covered with a bit of cretonne, or calico, and a twenty-five cent mirror and an every-day brush and comb answered for a retiring room?

And now, Mr. Stein, or Mr. Klein, all those people have elevators and an attendant to carry people upstairs; and yet you laughed at me when I told you to hide the machinery! Why, it is not so long ago since you began to put a wrapper about your pictures. Why do you do it? Because you know the sensitiveness of people; some people can go quietly out of their homes and stand in front of a slaughter-house, and never give a tremor; there are others, again, who cannot do this. You find men and women who are driven out of the room by a cat; and I love them.

The brother of the First Napoleon simply went into a conniption fit if a cat was in the room. You go into a butcher's shop, and if the man cuts off the bones and ragged edges and throws them on the counter, you shudder and shiver, the thing is all antagonistic to you, and you never go back; but if he takes them off nicely and neatly, and throws them to one side out of your sight, you are captivated with the cleanliness—pleased with it. It is just such dispositions that you must face; you have to deal with people of refinement and taste, and such temperaments cannot be met with brutal force; that creates antagonism, and you have lost your point.

There is a man in your convention to-day who will next year come before you with a hidden camera, a camera that is hid from sight, simply because he knows that that is an instrument of torture to some people. That is why I said to you yesterday, or the day before, to get rid of your "operating" room; don't cut off people's heads and arms and legs taking their pictures; do it as though it was a social call, that they came in and paid you for their pictures. Do it all pleasantly, genially, so agreeably, that they will say you are the best man in town. Greet your patron with a smile, and he will give back the best that is in him, his soul will come out to you. There are a great many things that we might study. I go into every exhibition, and look at the genre pictures, and I look at the other pictures, and I think that the photographer did not know the difference between fact and fancy, between mythology and poetry and imagery and fancy. He don't know where the line of one commences and the other ends. One man said to me up-stairs (in the exhibition hall), there is a woman dressed in an evening costume and taken in a snow scene. That's true; its fancy; it is poetic license: that is right under the circumstances with that subject. But when you look at a painting, as I did a short time ago, of the surrender of General Lee to General Grant, representing an historic fact, and I found General Lee dressed magnificently in his uniform, and General Grant without a speck of mud or a spot on him, with elegant lace curtains at the windows, beautiful furniture, and a magnificent carpet on the floor, I thought, however well that is all painted, the man who did that was ignorant of historic facts; he knew absolutely nothing of them; for there was not a carpet anywhere south of Mason and Dixon's line in 1865! (Applause.) The carpets had all been gathered up and cut into strips to make cots for the soldiers; and there wasn't a nice lace curtain in the whole of that country. I am talking about things that I know. I do know that General Lee was dressed magnificently that morning in a new uniform that had been sent to him from Richmond only a few days before; he wished to pay a compliment to General Grant; and I do know that General Grant came in there covered with mud and all wet, and apologized to General Lee for appearing before him in that costume, because he hadn't been off his horse in twenty-four hours. (Applause.) Those are historical facts; and you have a right to put them in your picture; you have no business to lie or to tell people something that never occurred.

Read Homer, Shakespeare, Byron and Moore, and have your heart filled with poetry. Then take up those old characters of Grecian mythology, and make pictures into which you put all the fancy you can, and let it run riot, but keep up the harmony, and that is all right; but I don't want kitchen scenes in which people are dressed to suit the scene, and then an oak chair put in; I dislike those things; they are all wrong. The line should be drawn between fact and fancy. Do you say, "We are limited in subjects?" Great Heavens! Subjects are as numerous as people. In all your conventions I have yet to see a single Cleopatra and Marc Antony. Cleopatra—that woman who stands at the head of womanhood in this world! Why? Because she was loyal to herself and to her country. I know they call her the old serpent of the Nile and tell you bad tales about her; but place yourself back two thousand years ago, and find a woman standing alone on the throne of Egypt, in whose veins there coursed the blood of a hundred kings, and you will find her combating the legions of Rome, led on by such people as Julius Cæsar and Marc Antony! She found that her own generals were not equal to the task of combating these men, that her own cohorts, as numerous as the sands of the desert, were not equal to the trained legions of Rome; and when she found that all had failed her, she used her woman's beauty, her woman's tact, and said: "I will conquer the conqueror," and, stepping on board her boat, she floated down the Nile under

the purple canopy of silken curtains, her boat propelled by a hundred oarsmen and the slaves decked in gold and silver and all the wealth of her country, and there, adorned in nature's garb alone, she met Julius Cæsar and conquered him, and saved her country—a loyal, great, grand and glorious woman, whom history has traduced. Isn't that a theme for you? Why have you never taken up the story of Cleopatra? And then, if you want something more attractive, can you imagine her standing on the balcony beyond the banks of the Nile, and straining her eye to look if she might see Marc Antony, the man she loved, and draw him up to the porch where she was, trying to protect herself from the mobs. There is no more dramatic scene in all this world.

Then, you say, "I want story, I want romance." Why, every rock and rill, every stream, every hill in all this beautiful country has its romance and its Indian traditions; all you need is to take the subjects up and study them. Why, if you will go into the woods and sit down under the leafy shades of a protecting elm, and there bring about you all the spirits that have haunted that land, what a world of beauty and glorious imagery of fancy is all about you! But you must be an artist to be able to do this. There are so many of us who are mistaken in our calling. You people think you are artists sometimes when you are not. You have not brought yourselves up to it. You have a little of the technical qualities; you have a little of the knowledge, but you must study the story of the life of the world. Read history and poetry. Take up everything your own nation furnishes you, and then you will begin to get something of that knowledge of the world and your art, which you must have. Some pictures set me to crying, just as some music moves me, so that I cannot express myself. A storm cloud passing over me affects me; the sunshine and the rain affect me. You are all more or less thus affected; and when you inspire yourself with love and devotion to your art, then you will commence to make pictures, good pictures; then you will commence to make portraits that are better than speaking likenesses; you will commence to model your faces, commence to get light into them, commence to make mothers' faces as Rembrandt painted the face of his mother. You remember he put into her face the glow of that golden ray of sunlight. To him she was his very life, and he put into her face her very soul—the glory that should rest on every mother's head. That is what made his pictures famous, and what makes them live. He had rules; he knew the rules of Michel Angelo, Raphael, and all those people that had gone before, and then he made a higher and stronger rule for himself—to be the best; and it lies within your power to do the same. You can be the best, if you will begin to think and study that which is about you.

Yesterday some kind friends took me for a ride through your beautiful city and out to your Soldiers' Home. What a magnificent thing it is to have been a soldier in this country, and to live at a delightful spot like that! As we drove over the road and made a turn, the sun was just gilding the housetops over on the hill beyond, and the valley lay all in the cool, green shades, and the gilded spires and housetops beyond made a magnificent picture. Yet, I suppose a thousand soldiers pass back and forth there each day and never see one of God's paintings! We are all so filled with the rush of the world, we rush to the office and to the shop in the morning, do our work and rush home again, get on a clean collar and a pair of cuffs, and rush to the theatre to see a mimic stage, a mimic scene that man makes, and hold our heads so close down to the ground looking to see if some man has not dropped a dollar, that we miss the whole glory of the landscape that God has painted for you free. (Applause.) When you open your eyes, when you learn to see and teach yourselves to see these things, then will come out of you all that is best, and you will hide the machinery. Another man says to me, "You say don't talk about dollars." Why, Hollinger never opens his mouth about a dollar in his gallery. He won't allow dollars to be talked about there; he leaves his door open, so he tells me. There is nothing in there to steal, I know. (Laughter.) He doesn't talk about dollars; does not allow the question of money to come in. We cannot always work for love; we must have food, clothing, and all those things that make life happy and comfortable, but you can now and then forget the dollars.

Last night at a lecture in your city I heard a man by the name of Elbert Hubbard. I wish all of you could have heard him; you would have been thrilled by him. That man was once a dock-laborer at a dollar a day in Chicago; but there was something in the man, and he drifted into oratory. And now he is making the famous Roycroft books. He prints some old poem, and he puts into it the spirit of genius that makes life livable. If you talk to that man he never talks of money. He is working simply for the love of work, and making money incidentally. There is a man out here, near St. Louis, that you have perhaps heard me speak about, who makes pottery. He has gathered up the old clay banks that the Spaniards worked, and he says that he can model it, because it has just enough metal in it to make it stay in position. He is making pots that are demanding the attention of connoisseurs both in this country and Europe. They wonder how it is that he can make them so thin; it is the marvellous clay that is behind it all. He told me, with his great black eyes looking me in the face, "My wife has spent half her life in figuring how much more I would be worth if I had made so many more thousands of fire-pots at 10 cents apiece! I cannot make them; it is not in me; I have to make the queer ideas that come to me." And there they are, thousands of them with that marvellous glaze upon them, no two of them alike. A man comes in and asks, "Can't you make a hundred like that?" And he says, "I don't know how I made that. I put in a little bit of this and a little bit of that, something like the old lady made her cake, and, whatever comes out, it is all I want." But his work has the mark of genius in it. And you see it sparkling with that rare tint that catches the sunlight when he holds it up to the window. When you get yourself filled full of that sort of a spirit of devotion to your art you will be be ready to make pictures that will live. But don't forget the business side; don't forget that business must always be attended to; if you have no particular gift that way, get somebody else in your employ that has, and let him attend to the financial side while you look after your art. Then, as I said to you the other day, you will take childhood with all its charm of innocence, with no care but to play with the flowers that spring up in the springtime. You will take pictures of young women and young men full of life and energy and ambition, ready to meet the world and its battles and win success. You will take middle-age, with all its cares and struggles, the mother with her little brood about her; the father, who is fighting the battle to keep them secure from want; you will take old age crowned with glory; every wrinkle will mean a halo; every gray hair will be full of dignity and reverence and respect. (Applause).

On motion, the Convention then adjourned *sine die*.

THE PICTORIAL EXHIBIT AT MILWAUKEE.

INSTEAD of the usual detailed review of the pictures shown at the Convention we this year give place to the opinions of prominent photographers concerning the exhibition as a whole. These opinions were stenographically reported on the spot, and thus convey an accurate idea of how the show looked to those competent to judge. We believe this plan will commend itself to the craft as more interesting and more profitable than a mere summary of the pictures exhibited. Professor Beck's report is most encouraging. Unfortunately, President Stein was in such pain from the injury to his foot as to be unable to give his report from the personal point of view.

Mr. Beck said: The notable thing of this Convention is the large number of individualities it shows. The men are thinking individually. The recipe is sinking into the past. Men are working upon distinct lines, based upon art principles, and the forward movement is pronounced.

It is not so much what they show now in the accomplished fact, as what some promise to do. The talent that is yet to develop into fulness is evident at very frequent intervals throughout the exhibit. Possibly the man who owns one of the complete gems of the collection is Mr. Edmondson, of Cleveland. He has a picture of the standing figure, full-length, in white. It has a movement that is exquisite, and its color suggestion and values are simply charming. The clever way he has used the chair to prevent us from seeing the background instead of the woman is clear evidence that the artist knows what he wants. The background is not thrown in, it is part of the fabric of the whole scheme.

Messrs. A. J. & W. G. Thuss, of Nashville, Tenn., show a standing figure which commands our attention. The figure is at home in its frame, and has a picture quality that can only be called high. Anyone noticing the delicate play of lines at her foot, and throughout an artistically managed figure, upon a quiet, half-tone ground will, if he understands anything about art, wonder at the photographer's ability.

Another worker who is in the first rank, and who shows it not only in one picture but in his entire collection, is Mr. J. C. Strauss, of St. Louis. He is an artist. Probably his best neighbor, and a most courageous innovator, is Mr. Minns, of Akron, O. For refinement, and thought, and originality we should study his work. Mr. F. J. Grigson, Terre Haute, has a portrait of a woman in riding habit, which is fine. Such space-filling and firmness, coupled with subtle treatment, is not easily matched in the other displays.

A picture of two women standing at a window, receiving their light from it, and their life from the artist's clever handling of the window to unite the two, brings Mr. E. F. Hall, of Buffalo, N. Y., forward as a strong man in his profession. Knaffl Bros., of Knoxville, Tenn., have a girl, an innocentia, that is exquisite. Dudley Hoyt's standing figure tempts us to linger and look.

Some of the best things are found among the miniatures: the best are by A. L. Bowersox, Dayton; I. Benjamin, Cincinnati; J. E. Giffin, Wheeling; Dudley Hoyt, Rochester; D. Rosser, Pittsburg; Moses & Sons, New Orleans. Pach Bros., New York, have a group of little children which is very charming.

To speak of all the pictures which have merit is beyond our power. There would be too much to applaud. There are old mistakes evident throughout—but they no longer worry; a few years, and they will have disappeared.

W. M. Hollinger, New York: The Convention being held in the West has brought in a great number of new men who have not been attending conventions in the past. By this large access of new material I think the general tone of exhibition work has been lowered from what it was last year; but the Convention, as a whole, is the best I ever saw. I think the color process the most wonderful thing I ever looked at.

W. H. Moses (of G. Moses & Son), New Orleans: I am delighted with the collection, which is ahead of anything shown previously. I think the throwing of the whole field open, *i. e.*, doing away with sections in the competition, has proved a success.

A. H. Griffith, Detroit, Mich.: I have not examined the exhibits in detail, but, speaking generally, the exhibit is better than anything we have had before.

The improvement is especially noticeable along art lines. Photographers are leaving the mechanical side and are developing a fine artistic sense.

E. J. Davison, Secretary Missouri State Association: The exhibition is one of the finest I have seen, notably so in the landscape collection. There are certainly some magnificent things there. I think Van Norman's work very superior, forcibly reminding one of the old masters, many of whose masterpieces I have examined in Europe. The Ives color process (Krōmskōp) shows in the stereoscopic effects an atmosphere lacking in the McDonough transparencies, but one advantage in the McDonough process is the cheapness with which the transparencies can be furnished to the people who could not afford a Krōmskōp to view pictures with.

W. C. Nicely, President Indiana State Association: I think the exhibition much better than year before last.

J. Nicholson, Indianapolis: I think it very fine in spots, and its unevenness is perhaps unavoidable under the circumstances.

W. G. Thuss, Nashville, Tennessee: The exhibit in general is good. I think the throwing all sections of the country into an open field is a mistake, and that three sections would be preferable. There is a noticeable falling off in the lower grades.

J. E. Giffin, Wheeling, W. Va.: I think the exhibit the finest ever shown at any convention.

Frank Moore, of Moore & Stephenson, Atlanta, Ga.: I think the pictures as a whole better than last year, but photographers have come here expecting too much. They can't carry in their minds the quality of pictures through the year.

F. G. Schumacher, Los Angeles: The exhibit is very fine; the best in general we have ever had. The miniatures are especially fine. Their delicate handling and technique show great care all the way through, and an improvement upon other years.

Charles E. Heath, Grand Rapids, Mich.: Referring particularly to the Grand Portrait Class, I think the work is the best that I have seen.

Dudley Hoyt, Rochester: The work is generally above the average, and the majority of the exhibitors have improved a great deal. Many are represented here for the first time; this is a good thing, as it interests these exhibitors, and practically proves to them the advantages of national conventions in the access to new ideas and methods.

C. F. Voigt: The exhibits are very good on the whole, and compare favorably with last year. I wish to say the opinion generally expressed to me from the outside is that this has been a most successful convention. The Ives process was unquestionably the sensation of the convention.

G. Cramer, St. Louis: The exhibit compares favorably with former years, and is as good, if not better. I think the Kromskop the most beautiful and the most perfect method of representing the colors of nature—a most ingenious invention. The carbon pictures in the exhibition were particularly fine, and showed most artistic effects. The convention is one of the most successful we have had, the attendance large, and the quality as well as the quantity good. A great deal of credit is due Mr. Stein for his hard work.

John Edgeworth, of G. Cramer & Co., St. Louis: The exhibits are among the finest I have seen in the twenty conventions I have attended. I refer more particularly to the Grand Portrait Class.

A. S. Ralph, President Wisconsin State Association: I think the benefits of the national convention will be generally recognized by the Wisconsin photographers. We had over two hundred of them here in attendance, beside their ladies, and they evinced great interest in the pictures.

F. W. Guerin: I think we had a beautiful lot of pictures on exhibition, and not so many poor exhibits as we have sometimes had.

C. M. Hayes, Detroit: The best pictures in the exhibits are better than the best of former years; but there is a wider difference between the best and poorest grades than at any previous convention—at least in the past ten or twelve years.

C. S. Abbot, Jamestown: Can't at present give you a fair expression, because I have not had time to go through the exhibit very carefully as yet. I have heard very favorable expressions from everybody.

F. R. Parsons, Studio Grand, St. Louis: I do not consider myself competent to

pass judgment comparing previous conventions with this, but think the photographers are now making pictures on artistic lines, a result, I think, due to attendance upon conventions. Such men as Guerin and Dinturff have made marked progress, especially in catching individual expression.

G. W. Pach, New York: I think it is an average exhibition; but it does not stand any higher than any former one. The exhibition of the Gold Medalist, in the opinion of many, is not up to the standard.

Charles A. Nast, Denver: In my opinion the present exhibition, as a whole, ranks quite as high as that of last year, while there are no single better pictures than were exhibited last year, and a few quite as bad as the poor ones. The general average is much higher, the great middle ground is better represented. Last year the exhibition left on my mind an impression of black, undertimed, harsh portraits. This is a more restful and quiet exhibition on the whole.

John Schneider, Columbus, Ohio: I think the exhibits this year are of a higher order than we have ever had before. A great many workmen who last year had pictures bordering considerably on the so-called "freak" idea, have retained a great deal of the artistic side, while they have improved the technical quality of their work, so that it is now photographically better while artistically good. I never enjoyed a convention better—plenty of enthusiasm, and everything has seemed to go smoothly and agreeably.

A. M. Bowersox, Dayton, Ohio: The exhibits are up to the standard, if not better than those of previous years. They average better.

George H. Van Norman, Springfield, Mass.: I think the exhibit is one of the best we have had, and shows an advance along several lines. There is more naturalness of lighting in the better pictures, and less of the made effect, what might be called the "puttying-up" process.

I. Benjamin, Cincinnati: The convention of 1900, although lacking in numbers of truly artistic portraits, showed a gratifying absence of those fearfully crude effects which were characteristic of the last two conventions. Taken as a whole, there was decidedly more individuality and less merely imitative work; also a more careful regard to balance than has previously been shown.

J. A. Brush, Minneapolis: It is one of the finest exhibitions we have had, and has given me as much pleasure as any I have visited in the last thirty years. The general improvement is very noticeable.

W. H. Potter, Indianapolis: Have not examined the exhibits thoroughly, but I especially admire the display made by the Baker Art Gallery, Columbus, also the one by Dudley Hoyt.

E. Goldensky, Philadelphia: I believe that the exhibit surpasses in quality previous ones, but there is a greater amount of poorer work, especially in the larger classes, than we have ever had before, especially noticeable in the *Genre Portrait Class*, *Grand Portrait*, and *Class A*. At one extreme we find the best examples of portraiture; at the other work which it is shameful to hang on the walls. *Class A* only had twelve entries, a very inadequate representation. A wonderful movement is the increase in the use of carbon paper, and I am positive that at the next convention it will be the only paper employed by photographers of taste and culture to exhibit their best works. The variety in style of carbons this year is remarkable. Good taste is displayed by many in framing. The lighting of the hall was most suitable, and has entirely fulfilled the promises made by President Stein at Celoron last year. I think photographers should study the exhibits more and be more ready to offer suggestions where needed. Men like Hollinger, Core, Van Norman, and Guerin should freely offer exhibitors their criticisms so as to lift the standard of work. I have frequently noticed Mr. Rockwood, of New York, in the exhibition hall with an interested group about him, listening to his comments, and that I admire in him.

H. J. Brady, Orange, N. J.: The exhibits I have examined are very fine, perhaps the best at any of the conventions. There is tendency toward more artistic work, which I attribute to the valuable suggestions made to photographers by lecturers and others at our conventions. The old stiff photographic effects are passing away.

J. P. Dorella, Indianapolis: I think the exhibit in some particulars surpasses that of

last year; there is some improvement, but too much poor work.

Frank G. Schumacher, Los Angeles: The exhibits of this year surpass in quality anything that has been shown in previous conventions, from the fact that the photographer has attained skill and knowledge of the handling of his subjects, and there is a lack of the accessories and backgrounds which have been so prominent a feature of the work of previous years.

George M. Edmondson, Cleveland: Take it as a whole the exhibit is superior to any collection that I have seen. I think the abolishment of the system of separating the different sections of the country is an improvement, and that it stimulates to better work.

WORKS OF ART: HOW TO SEE AND ENJOY THEM.

An especially instructive feature of the Convention, and one which will long be remembered by all who participated in its pleasures, was the visit made to the Layton Art Gallery. This formed the afternoon session of Wednesday, and was shared by over five hundred photographers, with their wives and friends. The visitors were received by the curator, Mr E. C. Eldridge, in a charmingly informal way, and under his leadership saw the many art treasures of the gallery.

We publish the whole of the report of the affair because it affords the photographer an excellent idea of how to visit a collection of works of art, what to look for, and how to enjoy its many lessons. The report, we may say in passing, is a decidedly creditable bit of work on the part of the official stenographer of the convention, Mr. Douglas A. Brown.

Mr. Eldridge explained that he preferred to accompany his guests from room to room, and chat with them while he lent them his eyes to view the various treasures of the collection as they would be looked upon by one who was familiar with and loved them. The following account, so far as it embodies the explanations and remarks by Mr. Eldridge, is necessarily brief, as to do full justice to this fine collection of art works it would require more than the limits of a magazine article.

Starting from the Hall of Sculpture, and before going to the picture galleries, Mr. Eldridge prefaced his remarks with a short reference to the history of the gallery. He said: "Frederick Layton bought the ground upon which this gallery is built of St. Paul's parish, whose church formerly stood on this site, paying $25,000 for it. The edifice, which was designed by the architects, Audsley Bros., of London, cost about $100,000. The nucleus of the collection now here was for Mr. Layton's private collection at his home; but immediately upon the opening of this gallery several of his personal friends, not connoisseurs, but simply inspired by Mr. Layton's example, contributed various amounts with which other pictures were bought. Mr. Layton also availed himself of opportunities afforded by the large sales, such as that of A. T. Stewart and George I. Seney, of New York, securing some of the masterpieces formerly included in those collections. Each succeeding year, as Mr. Layton visited Europe, he added with great generosity to the collection, so that the majority of pictures here found are donated by him. They were likewise selected by him, so that they represent and are exponents of the founder's taste in art.

"This building, the style of which your have noticed, is in the Neo Grec or Thompsonian Greek style of architecture, the elements of which are the lotus and acanthus leaves; and the ornamentation of the facade and exterior of the building is repeated in the ornamentation of this Sculpture Hall, which we consider the most beautiful hall of the interior.

"Among the seven marbles here, allow me to call your attention first to 'The Last of the Spartans,' by Gaetano Trentanove. This beautiful figure, representing one of the brave Spartans who defended the Pass of Thermopylæ, is the masterpiece of this sculptor, by whom it was exhibited first at the Chicago World's Fair. The dying hero is writing upon his shield with his finger, in blood, the Greek word 'Niki' —'I conquer.' As a piece of anatomic modelling this is considered most accurate and very beautiful."

Mr. Eldridge then invited attention to the marbles entitled "The Secret," by Salvatore Albano, "Ruth," by Prof. G. Ciniselli, and especially to the beautiful ideal head, "Proserpine," by the author of "The Greek Slave," our own American sculptor, Hiram Powers. He then passed to the inspection of the various paintings, stopping first at the life-sized figures by Hughes Merle, one of the modern masters of the French School—"Beatrice and Benedick." This picture he characterized as most remarkable as a scientific work of art, admiring particularly the careful way in which the artist has imitated all the stuffs, and his having obtained the quality of everything he has sought to represent. The various materials of the costumes are beautifully imitated, each by appropriate special treatment and technique of its own, appropriate to its especial peculiarity of texture.

"Here," continued Mr. Eldridge," we have 'Homer and his Guide,' by Bouguereau, one of the great lights of the modern French school of painting, and an artist who is very popular in America. The blind poet is seen on his travels, conducted by his young guide. He wears the frontlet of honor across his forehead, and over his shoulder is slung his lyre. In the distance we see some malicious shepherd boys, why are urging the dogs to attack Homer. A peculiarity of this painter is his fine work as a draughtsman, in which he is unrivalled among the French painters. His delicate modelling and careful attention to every artistic detail are what makes his work so perfect: as a colorist, his work does not excel, although his coloring is harmonious. On the left, we have a masterpiece of Bastien LePage, considered the founder of the modern realistic school of painting in France. This represents 'The Wood Gatherer,' an old man bowed down by his load of fagots, calling forth our sympathy for the laboring rustic. The little girl, poorly nourished, and in that typical of the children of the French peasantry, likewise excites our compassion.

"As we enter this large hall we have before us at the north end the life-sized figure of a cow, by Van Marcke, a pupil of the great Troyon, considered the greatest of all the French animal painters. The picture is entitled, 'The Water-Gate.' The cow, in apprehension of the approaching storm, which comes with great fury on the right, is looking toward its home. This picture is from the Seney collection, and

is considered one of the best pictures by Van Marcke ever brought to America--if not the very best. Mr. Seney contributed many treasures to the Metropolitan Museum of New York, but retained this picture, and presumably he kept the best for himself; therefore, we consider this the finest specimen of Van Marcke in America. This painter, beside possessing a profound knowledge of the animals which he represents, is a fine colorist, and, like all great painters, he faithfully reproduced the quality of everything he paints. Observe how different the technique employed to depict the hair of the cow is from that of the water and sky, whose qualities are equally well represented. On the right we have one of the pictures of Munkacsy, the author of the picture of 'Christ Before Pilate.' This is a genre subject, entitled 'The Rivals.' It is a masterly example of technical work. Upon approaching this canvas you will observe that the artist has drawn immediately with his brush all that he has represented; that everything has been done apparently with great haste, yet with consummate skill and intention. At the distance from which one should always look at a picture, that is, from two and one-half to three times its length, everything seems complete, while the brilliancy of coloring, only obtained by this manner of work, is very remarkable. As a colorist Munkacsy stands very high. Everything, as you will observe in this work, that he paints is artistic. Observe the rugs upon the floor, the portrait upon the wall, and the color of the wall; how rich, artistic, and just in tone they all are, while the figures are well composed and full of life and spirit.

"On the left of this painting we have a masterpiece of August Holmberg, a genre painter of the Munich School. This life-sized ecclesiastic, a cardinal, clothed in red, is an amateur antiquarian. He has just received a small jewelled chalice, which he is examining and intends to add to his collection of antiquities which surround him on the table, hence the name of the picture, 'The Latest Acquisition.' This picture is remarkable in its combining of both figure and still-life painting, each being done with equal care and skill. All the articles of vertu and beauty which we see displayed here are imitated with the utmost finish of detail, so that they give you exact ideas of what they represent. Observe the rare old onyx, the old books and ancient coins, the crystal tankard, gothic cup, and ivory statuette. This picture was one of the principal exhibits at the International Exposition in 1886 at Munich.

"The landscape which hangs over this picture is by Constable, the founder of the modern school of landscape painters, a painter who, as you know, in his lifetime was not appreciated in his own country. This picture, exhibited at the Paris Salon, won a gold medal from the king, and afterward was made a model for landscape study in France. Constable was a sort of forerunner of the Barbizon school of painters in France. To the left notice a charming little picture by Gazin, a very good specimen of what I consider the Impressionistic School. The picture, apparently, is painted on the impulse of the moment, and never passed over the second time, and gives that phase of nature which we are familiar with, so poetic and so delightful to contemplate—twilight. Entirely different in manner are the two pictures which we see further on by Vicat Cole, of the modern English school. His manner of work is very laborious; he paints and repaints, giving everything with great exactness as to detail, but missing, perhaps, the finer side of art, which is the poetic rendering of sentiment.

"The large piece hanging above in the centre of the panel represents 'The Midnight Sun at Bodoe,' the capital of the Province of Nordland, on the Norwegian coast. The sun is setting at half-past eleven. Observe that the artist has not painted the sun at a great height, thereby leaving the foreground in shadow. This undoubtedly was done to produce a greater effect of contrast. The illumination of the snow-covered mountains and the reflection on the water of this bright golden color is most remarkable. Underneath this picture we have a masterpiece by Erskine Nicol, a Scotch painter of Hibernian subjects. It is called 'Interviewing the Member.' The unhappy Member of Parliament on the right is being interviewed by a delegation of his Irish constituents. They have elected him to a seat in the House, and now they have come to hear what he has to say about their affairs. He is saying all sorts of flattering things in order to retain their favor, promising them different advantages if they will continue to elect him; but he has lost the confidence of these followers, as you see by their faces, and it looks as if trouble was ahead for him with them. Erskine Nicol's great forte is his character painting of faces. All of these figures are types of their kind; hence when one looks at them one feels that he has seen each one of them somewhere.

"A little further on to the left is a picture by Tissot, a French artist who has made a world-wide reputation by his treatment of Biblical subjects. It is a picture painted in his earlier manner, before he went to the East to undertake his Biblical series, and represents a scene in the porch of the National Gallery at London, with several little boys of the Blue-coat School guiding the visitors through. In the distance we have a representation of the Church of St. Martin's-in-the Fields. Next allow me to invite your attention to this masterpiece of Alma-Tadema, called 'A Roman Art Lover.' It is in reality an ideal restoration of a Roman palace in the time of the emperors, and as such it gives one a good idea of the architecture, costumes, and manners of the ancient Romans. (The speaker here pointed out different excellences of the picture.)

"This picture reminds me forcibly of the intimate relation existing between painting and photography. Photography has greatly aided painting, which it never can, of course, supplant. The reason why a painter likes a good photograph is because it is nature reproduced. Previous to making any ideal creations of his own he must inform himself thoroughly upon the subject of which he treats; and in his study of nature photography has been of most powerful assistance. This is particularly true as to the study of animals in action. You are all familiar with the experiments of Mr. Muybridge, who ascertained by photographing a horse running, in consecutive phases, the extent to which the horse projected his foot in the most rapid running. (Mr. Eldridge here reviewed some of the principles of Muybridge's system, and applied it to several of the pictures of running horses in this collection—notably that of Schreyer, entitled 'The Wallachian Post of Carriza.') Since the discovery of photography, and particularly since the great advance made by later processes and methods, and the increased facilities through which so many can indulge in the taking of photographs, the study of art, the basis of which is almost entirely a study of nature, has been greatly assisted. No intelligent photographer will expect to do by his art what the painter does with his; but within the limits of his sphere, by the skilful and intelligent management of his camera, and his understanding of the principles of composition, lighting, printing, etc., he will approach the painter in the art-side of his work; and if ever color is satisfactorily reproduced by photography we perhaps will reach the time when the most perfect representations of nature attainable will be at our command. I understand that individuality in photography is as much a feature of good work as it is in the work of the painter; there-

fore, I hold that there is the greatest and most intimate sympathy between the two.

"Now, entering the south room, I would call your attention to this large canvas, representing Munkacsy in his studio, with Madame Munkacsy seated by his side He is engaged in painting, and has stopped a moment to criticise his work. As in the other picture by Munkacsy, this interior exhibits rich and beautiful details in a most interesting way. As a genre picture this is a masterpiece, at the same time presenting a correct portrait of the artist himself. The landscape underneath represents a view on the Thames, by Karl Heffner. The large piece to the right is one of the best examples by Eastman Johnson, foremost among American genre and portrait painters, and whose portrait of Mr. Layton, the founder of this gallery, hangs in the north room. On the south wall here is a beautiful specimen of the work of Rosa Bonheur, one of the greatest of painters of animals. While not an important picture, it is of the very best quality of her work. The animals display that life and spirit peculiar to this painter—the eye has a great deal of lustre, the movement being fine. This little representation of 'The Little River' in France is the favorite landscape of Monchavlon; it ought to particularly interest you, because it is executed with such photographic exactness. Every tree and shrub is drawn with the utmost fidelity as to form, and the representation of its reflection in the water is very striking. Observe, also, the clearness of the atmosphere in an almost cloudless sky. The large landscape on the west wall, by Regis Gignoux, represents the 'New Hampshire Mountains.' This picture formerly hung in Mr. A. T. Stewart's dining-room, and in a letter which the artist wrote Mr. Stewart, asking permission to send this picture to the World's Fair and Centennial, he pronounced it one of the best of his works. Above we have a splendid marine, by Mesgad, a Dutch painter of marine subjects. It represents the beach at Scheveningen. The sails of the fishing boats in that country are tanned to preserve them from decay, a treatment which gives them a rich tone which, under the light of the sun, produces a very gay effect.

"We now pass to the north room, where, conspicuously among the good pictures here, is seen the masterpiece, by George Henry Boughton, entitled 'The Canterbury Pilgrims.' This picture was a commission from the Duke of Hamilton, upon which the artist bestowed his best pains and efforts. The pilgrims, going along the road, are being refreshed by people they meet; they have the characteristic garb of the pilgrims of that day. Off in the distance one sees the walls of an old feudal town. It is springtime, and the flowering wild apple adds much to the beauty of the scene. The next picture, a large composition representing 'The Frolic After the Wedding,' shows a scene familiar to all travellers in Spain, a newly married couple coming from the cathedral, receiving congratulations from outsiders, and distributing alms to beggars, who congregate around the church door upon such occasions. The young bride is a very pretty Spanish girl, whose husband views her with pride. All the costumes are Spanish, and everything is characteristic of the scene. Here we have a beautiful little specimen of Franz Defregger, the great Tyrolean painter. It is a little interior with children, these being the artist's own, and the picture is styled 'Sunday Afternoon.' The eldest boy is whittling a cross-bow for his companions, who are regarding the operation with deep interest. Everything in this little interior has an appropriate setting, the idea of space being well represented. Over this picture is an ideal head by Francis Millet, chief of the decorators of the World's Fair and a representative American artist. It represents a minstrel singing a hymn to an accompaniment upon the lyre. Next we have a large English composition entitled, 'News of the Victory,' by Laslett J. Pott. A curious-looking old stage coach, which you see in the centre of the composition, has pulled up at the Red Lion Inn, and while the passengers are getting out one of the travellers reads the news to the villagers—presumably the news of the Battle of Waterloo. The picture is full of life and activity. The types of people are English, and the costumes those belonging to the period indicated.

"Here is a delightful little specimen of the work of that most poetic of American painters, Alexander Wyant, a wood scene in which sunlight is made to have a telling effect. It is treated in a broad manner. The artist shows what can be done simply by tones of coloring and beautiful effects of light. Above it is a characteristic work by Andreas Achenbach, 'The Fish Market at Ostend.' Specimens of the early American school of landscape painting are shown 'In the Catskills,' by Asher Durand, and in 'Lakes of Killarney,' by John Kemsett. These belong to what is familiarly known as the Hudson River School, being by two of the founders of that school. Above we have the two only old pictures in the gallery, fruit and flower subjects, by Van Os, father and son. 'Hark! The Lark!' is by Winslow Homer, one of the foremost American genre figure painters, who has taken so many prizes in this country and abroad. Here is a charming landscape by Alfred Parsons.

"Returning to the large room, we see here a beautiful picture by Corot. Compare this with a conventional landscape by George Cole, and observe the difference in treatment by the two artists, making the merits of the great Barbizon painter more apparent. The only historical picture in the gallery represents the surrender of the city of Granada and palace of the Moorish kings to King Ferdinand and Queen Isabella of Spain. This brilliant work is the original picture, a large replica of which has been painted upon the wall of the Council Chamber at Madrid. This picture might be regarded as a perfect specimen of the painter's art, it being good in most all of the requisites that go to make up a great painting. The costumes of the noble group of courtiers around the Spanish King and Queen, the still more picturesque costumes of the Moors, whose King is about to deliver the keys of the city, the army drawn up in line in the middle ground, and the ruins of the old fortress of Alhambra in the distance, are pictorial elements that have well inspired the artist's efforts. This canvas, representing 'The Shepherd and his Friends,' is a specimen of genre painting, a class of subjects with which photographers are most familiar. 'A Summer's Day in the Meadows,' is a magnificent picture by Thomas Sydney Cooper, a veteran landscape painter of the English school, who, at the age of ninety-seven, still works at his art, he having four pieces this summer at the Royal Academy, London."

THE CONVENTION REPORT.—We desire to express our appreciation of the capable way in which the Convention proceedings were reported by the official stenographer, Mr. Douglas A. Brown, of Cincinnati. This is the second year Mr. Brown has had charge of the official report, and his careful work and promptness deserve the highest praise. The complete report was in our hands at the close of the Convention on Saturday.—ED. W. P. M.

WHAT THE JUDGES THOUGHT OF THE EXHIBITION.

THE subjoined letter, signed by the three judges at Milwaukee, is of exceptional interest.

ST. LOUIS, July 31, 1900.

To the Editor of WILSON'S PHOTOGRAPHIC MAGAZINE,

DEAR SIR: Complying with request in your favor of the 27th inst. for "a few notes about the pictorial display at the Convention," we wish to explain that when we left Milwaukee, quite a number of complimentary exhibits which President Stein informed us would be shown were not yet hung. Consequently, our remarks will be confined almost wholly to the displays entered in competition. We speak of these only in a general way, as none of the exhibits when we last saw them bore the names of the exhibitors, and we are unable to designate the individuals except those which we can now distinguish through the published list of awards.

The most obvious fact, one which impressed all of us equally, was the unevenness of the quality of work displayed by any one competitor. There were quite a number of exhibits in which were hung from one to four excellent productions, but these meritorious portraits were accompanied by others very far below the standard of prize winners, which were to be judged for giving "evidence of individual artistic feeling and execution."

In some instances—particularly in the *Grand Portrait* and *Class A* exhibits—it seemed almost impossible that the same man could ascend to the heights evidenced in one or two of his pictures and yet continue on the ordinary level in the remainder of his display. This fact made it very difficult to place awards. We feel it quite proper to state that if an award had been offered for the best single portrait in the *Grand Protrait* class, neither the winner of the first nor the second prizes would have been the successful competitor. There were several exhibits which had single pictures better than any in the displays which received the highest awards, but the quality of the remaining five pictures was such that the general average fell below that of other contributions more nearly uniform in quality.

The exhibit which received the highest award in the *Grand Portrait* class contained two pictures which should not have been honored, but in our judgment contained three portraits better than any three sent in by any other single competitor.

One tendency which impressed us painfully was that toward displaying *bearded old men.* Hardly an exhibit in the more important classes was devoid of whiskers. One exhibitor, unknown to us by name, had four pictures, out of a possible six, of this description. The ability displayed in his work was very praiseworthy, but was sacrificed to the sameness of subjects. The tendency here referred to which impels photographers to follow the lines of some one who has been successful with a particular subject is an unfavorable commentary on the individuality of our craft.

Another tendency which impressed us disagreeably was that of vigneting figures, leaving the subject in the centre of the print without support either from above or below. Many portraits otherwise pleasing were marred in this manner.

The *Miniature* class contained some very attractive examples of portraiture, and in the displays of those who received the lower awards were several beautiful, very artistic productions.

In the *Genre* class the contestants were surprisingly few, and, omitting the pictures displayed by the winner of the highest award, the subjects chosen were along lines which could not lay much claim to originality of conception. There was one delightfully charming picture, entitled "Gloria," in the exhibit which was given third award.

Among the *complimentary displays*, which were hung before our departure from Milwaukee, those which especially attracted us and commanded admiraton, were from Core, Hali, Spellman, Reeves and Knaffl. Very truly yours,

M. J. STEFFENS,
J. C. STRAUSS,
F. M. SOMERS,
Judges.

THE OHIO-MICHIGAN CONVENTION.

PUT-IN-BAY, LAKE ERIE, OHIO.
AUGUST 21, 22, 23.

We make our first bow as a united association with the conviction that "In union there is strength," and that with our combined membership we will make a convention that will be much more profitable to attend. Believing that more time is generally taken up by routine business than is necessary at conventions, we will endeavor to condense that, and devote more time to practical things that concern each of us in our own business as photographers.

Our President, C. M. Hayes, has had years of experience as an officer of photographers' associations, and is working with the end in view of making this a convention from which the members will derive the greatest amount of actual benefit and useful knowledge.

Francis Paulus, Director of Detroit School of Art, will lecture one day on *Masterpieces of Light*, and another day on *Hands: How to Naturally and Properly Dispose of Them in a Picture.* Professor Griffiths will tell us about the uses and abuses of *Backgrounds and Accessories.* There will be plenty of practical demonstrations, among which we are promised the following by experts in each line: *X-Ray Photography*, and how it can be utilized by the photographer for profit; *Carbon*, with demonstrations by T. J. Courtney, manager of the American Autotype Company; *Aristo Platino*, by Harry Fell, of the American Aristotype Company; *Platinatype Paper*, by Willis & Clements.

The three days will be brimming full of pleasure and profit. The Hotel Victory is an ideal place for conventions, and everything possible will be done for our entertainment. The manager will give the Association a steamer excursion around the islands, accompanied by the hotel orchestra. The hotel rates to those attending the convention are $2 to $4 per day, but they have agreed to provide everybody who wants them with $2 rooms. The rates to the island are as low as can be desired. A regular summer tourist rate of about 2 cents per mile may be obtained for the round trip from nearly every point. Ask your ticket agent about it. Leave your hot city work-rooms during the dog days and spend the time with us at the cool, delightful island of Put-in-Bay, and you will return refreshed in mind and body, ready to do better work and more of it. Don't fail to send an exhibit, as you know half the benefit to be derived from a convention is obtained by direct comparison of your own work, and helps make the convention a success.

The prizes are liberal and should stimulate a large exhibition of good work. Our special prizes of $50 in gold, and gold and silver medals, are offered in order to bring the best work of the country together for study and comparison.

C. S. BATEMAN,
Norwalk, O. Vice-President.

THE NEW ENGLAND CONVENTION.

WE learn from President Henry H. Pierce, of Providence, R. I., that the New England Convention is to be held at Copley Hall, Boston, September 12th, 13th and 14th, and that arrangements have been made for a record-breaking affair. Full particulars may be obtained from Mr. Pierce, addressed as above, the information here given being all thus far placed before us by the Association.

SITTERS AND THE PART THEY PLAY IN PHOTOGRAPHY.

IT seems surprising, considering the wide-spread interest now taken in photography, that there should still exist so much misconception on the part of sitters generally in regard to the important part they play when being photographed.

In the matter of dress, for instance, it is surprising what an amount of difficulty professional photographers have to cope with when dealing with the public generally, and they are often surprised at the ludicrous examples in taste, both as regards the color of the garments worn, as well as the style laid before them for some particular class of photograph, such as full lengths, or busts, etc.

It would appear as if a very general opinion prevails among a large section of the public that a photographer now can make a good picture out of any material or colored garment, and that many of the earlier strictures with regard to dealing with certain colors which did not photograph satisfactorily are no longer in force, and so, when Mrs. So-and-So happens to become the happy recipient of an elegant new gown, or other fashionable article of wearing attire, which just suits her so nicely, of course, the first thing resolved upon is to be photographed, so as to appear to the best advantage, and then it falls to the lot of the professional photographer to produce a picture, it may be, out of a garment that, in respect of color, is about the worst possible, or in a style of portraits that does not lend itself to the particular garment at all.

Others, again, when circumstances arise, necessitating the requirement of a portrait being taken, pay but little attention to the matter of the dress that best suits them, or which is more particularly suited for the style they desire being taken in, and, just because Mrs. So-and-So had such a nice full length taken, she would like to be taken in that style also, no thought being bestowed upon the suitability of the style for the garments worn, or that one sitter may suit a particular style of picture better than another. In the choice of style gentlemen sitters are quite as often as great offenders against good taste as ladies.

Of course there are exceptions, and sitters are found who can discern between what would be a suitable class of picture for the particular costumes they are wearing, such as knock-about attire, or cycling, boating, or other special class of garments. Others, again, have the good sense to be guided by the photographer as to what would be the most correct kind of picture to adopt in such summer garments; but it is surprising how many sitters appear to have only one idea as to the style they wish to be photographed in, and, no matter what class of costume they are wearing, their one desire is a vignetted head and bust, a photographer often being driven to his wits' end to know how to persuade such sitters to select some more suitable style of picture. Then, again, in the matter of the wearing of hats or other head gear much ignorance is displayed, and it is difficult to get some people to understand that hats do not go well in a picture without any boots, and that they are generally worn out of doors, not inside, and also with other classes of head gear, which may be said to compose part of a costume, ludicrous effects are often desired by sitters.

It is well known that clever portraitists are often at their wits' end in devising alterations in the matter of dress as worn by their sitters, and not a few make bold enough to offer suggestions that necessitate the latter wearing borrowed plumes or garments, which they keep specially as a sheet anchor to meet some particular case with which they have to cope where some unsuitable article of dress, both in regard to color and style, is worn. An example of this sort of thing may be cited in such an article as a light feather boa. A little consideration will show a photographer how much may be done with a garment of this description in the way of improving the appearance of a lady sitter. Take, for instance, the case of a lady who presents herself and asks to be photographed in a low bodice or evening dress. At a single glance the photographer notices first of all that the color of the material worn is unsuitable, and also that the sitter's bust and neck, in vulgar parlance, are too scraggy ever to produce a pleasing result in the style desired.

Then comes into play his cleverness at *finesse.* Of course, it would never do at the very outset to pass any uncomplimentary remarks either as regards the dress or the physical condition or appearance of his fair sitter, but he can, by cleverly displaying one or two charming stock specimens, in which the aforesaid boa is so well introduced, eventually succeed in persuading the lady just to try it on, as it were, and then, by means of a little flattery when it is artistically entwined around the neck and shoulders, and artfully displayed to cover up the scragginess, he will certainly have gained his point in more ways than one, and accomplish much to ensure a result that will afford satisfaction. In the matter of costume pictures, again, there are numerous other accessories and artifices known to clever operators that go far to please customers. We can well remember what a clever photographer (who has long since gone to his rest) did in bringing

under the notice of his Scottish sitters a very handsome Highland costume specially kept for the purpose of this particular class of customers, who insisted upon full-length portraits in the most unsuitable dresses. "I have photographed that kilt thousands of times" he said, "and it's paid me well."

It is, however, in the matter of wearing unsuitable colors that the public generally err most; and when it is borne in mind that a photographer is still practically powerless to portray in their true color-values all the various hues met with in the different articles of ladies' attire, it will soon be evident that the more a sitter studies to appear in a dress that is suitable for photography, the better are the chances of satisfaction being experienced by all concerned.

No doubt every lady has a strong partiality for one, or, at most, two particular colors. This she looks upon as "*her color*," and wisely so, perhaps, and makes a rule to adopt it in her wearing attire, simply because it suits her best. On the other hand, they possibly may be unsuitable for photography, for when it is remembered that yellow, salmon-pink, and fawn all yield a grayish tint in the resulting photograph, and that light greens and blues yield white, while dark green and dark blue come out almost black, it is not surprising that disappointment often is felt at the results produced.

Then, again, where a combination of colors is worn in a costume, a very wide range of different tints will result; hence it is evident that some thought should be bestowed in the selection of those colors that will best harmonize or combine well. White, gray and black are looked upon as the most suitable tints for photographic purposes. The former will combine well with black or dark blue, or red or brown, simply because all these hues yield a dark tint in photography. Gray will be found to combine best with white or black, and black will combine equally well with light blue or light green or gray, simply by reason that these colors, as previously stated, yield a light tint.

It is, however, not only in the matter of color that attention should be given to what is best to wear. There is, also, the question of the most suitable material.

Velvet has always been recognized as perhaps the best of all photographic materials, and it will be found to combine well with linen, lace, crape and fur.

Silk, as a rule, does not combine well with linen, but cloth will generally be found to combine well with the same materials as velvet does. Fur will be found to combine with silk and lace, and many kinds of cloths and serges go well with silk. White calico will work nicely with linen and the different cloths.

Some consideration should also be bestowed upon several other equally important matters, especially that in regard to the manner in which the hair is worn. This is a matter that concerns every sitter in a marked degree, and, although, to a certain extent, will be dependent upon fashion where ladies are concerned, it however ought never be permitted to interfere with one's particular individuality. Of course, clever portraitists have their own ideas in this matter, and, if left to themselves, might offer suggestions which would not meet with the approval of many of the fair sex. No doubt, however, a clever operator can take advantage of the style the hair is dressed in by so posing the head as will yield the most pleasing effects.

For instance, it is well known long drooping curls are best suited to a head in profile, and a fringe of hair can be made to suit certain kinds of foreheads, which would be out of the question with others.

One of the first things a portrait photographer has to get accustomed to is "disappointment." No one need attempt to try and satisfy every sitter that comes before him; and, strange as it may appear, it frequently happens that, by reason of an outrageous taste on the part of a sitter, the most satisfactory results to a photographer will often fail to please his clients, and to such an extent will this be experienced that there will be times when an operator feels so disheartened as to be inclined to throw portraiture overboard entirely. Such fastidious people, however, seldom get pleased anywhere, and this should be kept in mind by those who suffer such disappointment.

We know of one case in a group picture quite recently taken where a most excellent result was obtained in the case of over a hundred sitters. A schoolmaster found fault because the ends of his mustache

were not sufficiently curled up. Operators, however, after a time, get accustomed to these little cranks on the part of their sitters, but they prove very annoying at the beginning of a career. All considered, portraiture is not the most pleasant branch of photography, and it takes a man with a more than the usual amount of tact to cope with the many silly weaknesses on the part of both male and female sitters.

On the other hand, the world is not made up entirely of cranks or those who are seldom satisfied. There are reasonable and sensible people to be found, who know that sitters have their part to play in portraiture as well as the photographer, and it is a pity there are not more of them in the world. The successful operator, however, learns to humor his sitters.—*British Journal of Photography.*

WASTE.

BY WILBUR GRÜBEMAN.

"CLOSENESS" or stinginess is a sad fault which is fortunately rare with photographers, but its companion fault of wastefulness is all to common. Have you ever thought over the *needless* waste in most photographic businesses. A sitter comes in, and six or ten plates are exposed. Why? Simply because plates are bought by the case, and they are so mighty conveniently to hand. Do I advocate cutting the sitter down to a limit of two plates? Not exactly. But those ten were exposed so that, out of so many, one or two acceptable ones would be obtained; and the same result might have been reached with two plates if the photographer had made sure of his pose and of his effect before he posed.

A well-known photographer decided that he needed a change—he was falling behind a bit—and he tried sepia platinums. Some beautiful effects were shown in his showcase, but for every one right there were six spoiled ones. His printer was getting about $20 a week, and a good ten cent cigar was a luxury to him and something to be enjoyed to the full. But when it came to paper, he wasted the price, not of a cigar, but of boxes full of them, and all his employer did was to foot the bills. There is a big dividing line between overcarefulness and waste, and the greater number of photographers are on the "waste" side. Laziness and lack of care more than double the number of plates which should be sufficient. Just think of the saving if the plate bill were cut down by half. Have you ever thought of the waste by careless buying or careless keeping tab afterward? The average photographer seems to have a sad habit of buying stuff he doesn't want and of hanging on to it forever afterward. There is an old photographer in a Pennsylvania town who has more than $10,000 in useless stock. He must have more than a ton of mounts that he will never use—thousands of old-fashioned ones bought in the eighties or earlier. Every twelve months he has a stocktaking, and everything is carefully taken off the shelf, dusted, and put back. At such times the old man grows reminiscent, and tells how some enthusiastic drummer of long ago overpersuaded him. But the old man is a willing victim, and if he holds on ten years more there is little doubt that his stock will then hold some of the elegant mounts introduced in the last year of the nineteenth century.

Why do so many men hanker after a big camera? Their ambition seems to be a 17 x 22 plate, and it would appear that they gauge success by size. There never was a greater mistake; indeed, it would almost seem as if the reverse were the case, for some of the "horrible examples" of photography have been on enormous plates. To work blindly for a success as so many men do is to waste money that might be much better put into the buying of a house and lot. I have seen some of the worst of large work from the camera of a man who was doing very good work indeed in small sizes. He was a man of wide ability, for he would give his customers "old" or "new," as they preferred, and good work at either. But when he got onto his 17 x 22 plates he just made enlarged examples of the worst type of cheap work. Great, glossy, over-retouched prints that were a discredit to any man. He would make a print of, say, a lady in even-

ing dress, and the great masses of white showing the neck and arms looked many times worse than had they been in a small size. One of these prints would be mounted on a mount with a generous margin, and the whole enclosed in an envelope as large as an open newspaper. Such a picture meant the waste of solid dollars.

If we would all learn to go carefully and think more before we used, we would, without niggardliness, prevent much waste of material, and in that very striving to prevent we would find a way to improved work.

DOES BACKING SLOW THE PLATE?[1]

BY W. E. DEBENHAM.

A QUESTION has been raised as to whether a backed plate requires longer exposure than one which is not backed, or, as it has been shortly put, "Does backing slow the plate?" Some have not hesitated to affirm that backing does necessitate an increased exposure, and I think that a proportionate speed in the two cases has even been stated as generally applicable. The question is one to which a simple yes or no answer, universally applicable, cannot properly be given, as although the cases in which any gain in rapidity can be detected from the use of an unbacked plate may be very rare, and even then accompanied by loss of quality, yet in the interest of strict accuracy a qualified reply should be given.

The idea that an unbacked plate will work faster than a backed one doubtless originated from a knowledge of the fact that what is known as auxiliary exposure may be employed to aid the more faintly illuminated portions of the image in registering themselves on the plate. Auxiliary exposure was employed to some extent in the collodion days, and is effective in some cases with gelatine plates, although not generally advisable.[2] Among the methods suggested in the collodion days was the use of a looking-glass behind a plate—a method resembling the use of an unbacked plate in that the auxiliary light acts chiefly close against the high-lights, and not on large masses of shadow.

The method generally adopted when any auxiliary exposure was desired was the exposure of the whole surface of the plate to the action of weak light for a definite period. This plan is much more to be recommended, as it is a recognized maxim that the exposure should be fixed as sufficient to bring out the faintest radiations that we desire to register, or, as it is sometimes put, "Expose for the shadows; the lights will look after themselves," and these faint radiations commonly exist as weak lights, breaking up large masses of shadows, out of reach of what is reflected in halation.

As the effect of backing is to prevent reflection into the film of that light which would cause halation, and so act as auxiliary, it follows that if a plate is coated sufficiently thickly to prevent halation without backing, the presence of backing can have no effect on its speed. The same may be said of any ordinary plate when the contrasts in the subject are not so great as to cause halation.

Let us now consider the cases in which halation may come in as a factor rendering a shorter exposure desirable with an unbacked than with a backed plate. In the first place the contrasts may be so strong that the high lights and the parts immediately surrounding them will be blocked up and appear over-exposed with an unbacked plate before the large masses of shadow are sufficiently exposed to show the desired detail in them. In this case a compromise may be effected and a shorter exposure given to save something of the lights, whilst sacrificing the shadows. Of course, the result is inferior to what would be obtained on a backed plate with exposure sufficient for the shadows. Another case is where the lights are evenly distributed throughout the picture, and the shadow details nowhere distant from them, as in the case of a window with the groining or device separating and immediately surrounding the panes of glass. Here halation will act as auxiliary exposure,

[1] Read before the Middlesex Photographic Society.

[2] Some of the experiments by the late Professor Burton and myself on the effect of auxiliary exposure on gelatine plates were published in the early eighties.

and allow of a shorter exposure being given, although, as before, with inferior results. Another possible case is in copying a black and white line subject, when with a thinly coated unbacked plate a shorter exposure than will suffice to get density in the lights must be given, to avoid filling up the lines, both by irradiation and halation—again with inferior results.

Leaving these exceptional cases, it may be said that with a fairly coated plate on an ordinary subject no difference of speed can be detected between a backed and an unbacked plate. I have here four negatives, all of which are on plates that were backed on one-half only. The first is on a sensitometer, and no trace of difference can be discovered between the backed and the unbacked halves. The second is exposed on some trees in a garden, and there is no difference in the two halves, except that at the top of the unbacked half the twigs and leaves suffer slightly from halation, whilst on the backed half even a telegraph wire is distinct. The third is a window, and though the lace curtain is clearer in the backed half, there is no difference in the detail, either of the furniture below or of the cornice above it. The fourth is of a drawing-room with window in the centre. Here the table in front of the window and the ornaments upon it show lighter in the unbacked half, and the same effect is noticeable in the music stool and end of the piano which come in front of the white lace curtain. At a short distance from the window, however, the dark corners of the room are alike in the two halves.

To sum up, then, backing does not effect the exposure, save in a few exceptional cases, and in those cases the exposure is only shortened by submitting to a sacrifice of the better quality which backing would have secured.

COPYING.

BY FREDERICK A. ALLISON.

THERE are many branches of work which come so seldom to the photographer that he is not equipped for them. If he is a shiftless worker he says, "there is nothing in it anyhow," and so refuses the job. If he is progressive and in love with his profession he takes a leaf from the amateur's book, and improvises the required apparatus.

Copying is one of these branches and one which can be done without any addition to the usual stock in trade of the photographer, though of course if money is no object it will be easy to pay out cash for special fittings.

Like everything else in photography, the chief element of success in copying is the special care given to the requirements of the thing in hand. A photograph or a photogravure may suggest slightly different handling from a line-drawing, and different again from a painting.

For subjects where absolute definition is not necessary a good R. R. lens may be used. But if fine line work has to be copied an anastigmat lens should be used. It is not absolutely impossible to copy line work with a R. R. lens, but it must be stopped down so very far that focussing will be very difficult, and a mere approximation is just what we do not want. The lens should not be too short a focus, or it may have to be so near the picture that the shadow of the camera will fall upon the picture. This of course applies to a copy near the size of the original. If a very large picture is copied in a small size the short focus lens can be worked at a comfortable distance, when a longer focus might cause trouble.

The camera should if possible have the virtue of solidity, though if it can be kept quite free from any vibration the flimsiest of hand cameras will do the work. Preferably the focussing should be from the back, for the work will be easier, especially if a fairly large camera is being worked at full extension. The camera may be fixed to a table with small castors on two of its legs only. This can easily be moved about, but will stand firm when required and not yield to an accidental touch. The picture can be fastened to a wall on which horizontal and vertical lines are marked around a spot showing the height and position of the lens, to aid in center-

ing. The table can be wheeled toward the picture, and when in approximately its correct position the picture accurately focussed.

It is sometimes recommended to make a sliding table, that is one with two parallel pieces of wood screwed to it, between which the camera can tightly move as in a groove, the picture to be copied being placed in a carrier at the other end of the groove. This may be all right for amateur lantern-slide making, but for copying it does not give sufficient scope for adjusting the camera to a proper centre.

To fix the picture to the wall—or to a board set against the wall—use drawing pins. Don't push them through the paper, but just outside, so that the head catches the paper, and if put in with the point slightly slanting from the picture the smallest bit of rim will suffice to grip the edge of the print. By using a large number of pins a very curly print can usually be coaxed flat; but in extreme cases a sheet of glass must be used. If the picture has become creased place it between slightly damp blotters and pass a flat-iron over it a few times with a fair pressure, and let it remain between the blotters for a few minutes.

Where the picture to be copied is bound in a book a little care may be required. Put a strip of thin, tough board on each side of the picture and flatten it, together with the leaves and cover behind it, to a board placed against the wall, by means of two strings passed tightly round the two strips of wood and the board. The book may be opened at right angles, and all that comes after the picture may rest on a temporary bracket fixed to the board, and removable. If the leaves show a tendency to bulge they may be flattened by the additional pressure of a few little wooden wedges under the leaves. If the paper on which the picture is is not quite opaque, slip a piece of white paper behind it.

After all these mere but necessary details comes the one vital point—the exposure. This may vary from seconds to minutes, or even longer, according to the subject and the light. And unfortunately when we get a flat unsatisfactory negative it is sometimes difficult to say whether it is under or overexposed. A pyro and soda normal developer is the one I prefer, and this too was suggested some little time ago by Mr. H. C. Rapson, who advised also timing development. He says, "My experience is that a black and white negative should develop with pyro and soda in from ten to fifteen minutes, according to temperature, and that, if they do not develop in that time, they will be flat through underexposure; and also, that if they develop much quicker, they will be flat from overexposure; and as it is a very difficult thing to judge by the resultant negatives whether they are under or overexposed always time development, and judge by that. I also find that, with the plates I use, the maximum density, without choking the lines, is obtained in four times the time it takes to get the whole outline just visible.

"Here I should like to mention that there are degrees of black and white. Blacks may range from the pale blue-black with many rotten or half-decayed places, or the faded rusty black of old books, to the intense black of modern engravings, and white range from the faded yellow of some old books, and the yellowish cream papers to the pure white of some of the new engravings. It is obvious that the same class of negatives cannot be got from a rusty black on faded yellow as can be got from an intense black-and-white engraving; but it may surprise some that the very white and black print will stand more exposure than either of the others, and the rotten blue-black on cream the least of all. But it is from the fact that the intense black will take longer to reflect any appreciable amount of light than the faded ink, while the blue-black, being a more actinic color, and thin, will stand but very small amount of exposure, though, at the same time, the whites are in inverse ratio; therefore, taking exposure, the ink will stand as two to one, and the reflecting power of the whites as two to one, there will be a difference of four to one in the resultant negatives. That is an extreme case, but such can be easily be found. In the case of the faded print, a clean but thin negative can be obtained, and is sufficient for some purposes, but for others must be intensified, while a rotten print will never copy well, as every thinness in the ink is exaggerated. So always expose for the longest time that the blacks will

stand without developing up, and that is the point where you will get the strongest contrast; with less, the whites take so long to come up that the blacks fog; with more, the blacks will develop before the whites have gained sufficient density, and, as before mentioned, will both be flat.

"In copying a photograph two or three times, the black and white exposure should usually be given according to the density of the photograph to be copied and the class of negative required. In extreme cases of flatness or a mere ghost of an image, the brighest effect will be obtained by exposing the same time as for a black and white, while very hard and solarized gelatine prints will want four times that exposure. I should always advise correcting errors as much as possible in exposure, as it is easier and more certain, and, in case of more being required, it can be done in development without much loss of time, whereas it, at best, can only be done with great waste of time in development alone. Another reason is that if you alter gradations in exposure, you can develop two very different negatives in the same dish, side by side, and get what you want. Don't get your negatives too dense, or your image will show all the marks of the paper copied. I find that a good time for developing photo-copy negatives is three times the time of the first appearance of the whole outline, in all usually six to ten minutes. This, of course, depends on the exposure."

COLORED TRANSPARENCIES BY ABSORPTION.

BY R. DEFAYS.

By means of the process described below window transparencies of every tint can be obtained, while by combining positives in different shades of color in a harmonious manner charming results are produced.

It is necessary in the first place to coat some clean pieces of glass (spoiled plates will do very well if they are first carefully washed) with a solution of gelatine prepared by soaking fifty parts of gelatine in five hundred parts of cold water. When the gelatine is quite soft it is melted by means of heat, and when entirely dissolved two or three parts of a five per cent. solution of chrome alum are added. The glass is coated with this solution in the way formerly recommended for coating dry plates with gelatine emulsion by hand; the plate must be kept in a horizontal position until the gelatine is set.

Instead of plates prepared in this way, stale dry plates, or others that have been accidentally fogged by exposure to light, may be used. They must be first immersed in clean solution of sodium hyposulphite until thoroughly fixed, and then be well washed.

The plates, however prepared, have next to be sensitized. As from this stage onward they are sensitive to light, the operations which follow should be conducted in a red or yellow light—but plenty of it may be used. A bath is prepared as follows:

Iron perchloride	3	parts.
Citric acid	2	"
Water	100	"

This bath will not keep, and ought not to be made up, therefore, for more than an hour before use if satisfactory results are to be obtained. The plates are immersed in it for ten minutes and then put up to dry in the dark.

Exposure is carried out to daylight in an ordinary printing frame. The plate must be printed until the image is visible upon it, and may then be removed from the frame and immersed in one of the following baths. It will take up the color according to the bath employed.

A. For blue images:

Water	300	parts.
Prussian Blue	1	"
Gum Arabic	2	"
Gelatine	50	"
Sodium Carbonate (10 per cent. solution)	1	"

B. For green images:

Water	300	parts.
Scheele's Green	1	"
Gum Arabic	2	"
Gelatine	50	"
Sodium Carbonate (10 per cent. solution)	1	"

C. For black images:

Water	300	parts.
Liquid Chinese Ink	4	"
Gum Arabic	1	"
Gelatine	60	"
Acetic acid	0.1	"

D. For red images:

Water	300	parts.
Fuchsine	0.6	"
Gum Arabic	1	"
Gelatine	15	"

E. For yellow images:

Water	300	parts.
Gum Arabic	1	"
Gelatine	50	"
Acetic Acid	0.1	"
Sienna Earth (25 per cent. solution in alcohol)	20	"

The plate should be immersed in one or other of these solutions according to the color desired, warmed up to a temperature of from 20° to 25° C., and allowed to remain there for from five to ten minutes. Only those parts of its sensitive surface which have been exposed to light will be found to be capable of absorbing the coloring matter. If the whites of the image are tinted in any way, it is a sign of overprinting; on the other hand, if the halftones are incapable of taking up their proportion of the color, the plate has been underprinted.

If other colors are wanted they can readily be obtained by being guided by the formulæ given above. The exact composition for the bath to secure any one particular effect will be readily found after one or two trials.

The aniline colors, in spite of the variety and brilliancy, are not to be recommended for this purpose, because of their want of permanence. Still, I have seen transparencies by this method made with an aniline dye which have not appreciably altered, although they have been made two or three years.

The transparency, after being taken out of the color bath, has to be dried without washing. When quite dry it may be passed under a tap once or twice very quickly, or dipped a few times in a dish of clean water, to remove the excess of color, and then, once more, it is dried. It only remains then to back it up with opal or with ground-glass for the mounted transparency to be completed.

Instead of one or other of the glasses just mentioned, a matt varnish may be employed for the same purpose. The following formula gives a matt surface with a very fine grain, which is well suited for transparencies by this method.

Ether	125	parts.
Powdered Sandarac	10	"
Gum Dammar	3	"
Benzine	50	"
Alcohol	from 1 to 1.25	"

The process I have described is equally applicable to paper prints. For this purpose a rough-grained Whatman paper will be found best suited. It is thoroughly wetted on *both sides* and immersed for four or five minutes in a solution made up as follows:

Water	300	parts.
Gelatine	25	"
Alcohol	10	"

The paper is then taken out and hung up to dry. The sensitizing, printing, development in the colored baths, and in fact the whole of the subsequent operations, may then be carried out in precisely the way I have just described for glass.—Translated in *Photography* from *L' Objectif.*

EDITOR'S TABLE

THE fine example of portraiture which serves as our frontispiece this month is the work of Mr. G. H. LOREY, of Saratoga, N. Y. Some months ago Mr. LOREY submitted to us a series of five photographs of the American soldier, made on plates 11 x 14, all handled in the distinctive manner shown in our frontispiece, and intended for publication purposes. Their cleverness and freshness of treatment prompted us to ask permission to put the best of the series before our readers, and Mr. LOREY generously agreed to this, sending us a reduced *fac simile* of the original negative for our use.

Considering the prominent part played by the American volunteer in the history of the last few years, it is astonishing that Mr LOREY's admirable portrayal of the type is the first to be produced by photography. And it is interesting to see that in many things this photograph surpasses the ideal portraits of the same subject which have recently enjoyed such a large popularity.

The picture offers the valuable suggestion that there is profitable pictorial material everywhere for those who have eyes to see it. In conception, pose, and treatment the photographer has shown a fine appreciation of his subject, and we congratulate him upon his success. We presume that copies

of the original in large size, as well as of the whole series, may be obtained from Mr. LOREY. Their attractiveness as display pictures is evident.

The prints for our edition were made on *Special Rough Velox*, a paper which is peculiarly adapted for this class of work, whether for publication or private custom.

The pictures by Mr. PARSONS, NADAR, and Mr. ZIMMERMANN, reproduced on other pages, are referred to in the article which they accompany.

THE EASTMAN KODAK CO. writes us as follows: "Probably some of your readers are intending to go to the Paris Exhibition, and if so, they would unquestionably be interested in seeing what American manufacturers are doing there. As a matter of importance to them, we wish that you would be kind enough to state that the Kodak Exhibit is situated in the Palace of Education, Champ de Mars, near to the Eiffel Tower and the Avenue de Suffren, ground floor, United States section, group III, class xii."

WE have received many prints from the Exhibition at the Milwaukee convention. These will be presented in this MAGAZINE and the new volume of *Mosaics*, now in preparation. It is our intention to make this collection of the best work of the year as complete as possible.

A NEW catalogue of *Collinear Lenses* and *Porro Prisms* has been received from the VOIGTLÆNDER & SON OPTICAL CO., 467 West 14th St., New York. The *Porro Prism Binoculars* are as great an improvement over the ordinary binocular as the anastigmat is over the ordinary rapid rectilinear lens. The catalogue also offers valuable suggestions on the use of Collinear lenses for small cameras, or in sets giving combinations of various foci, and the new Voigtlænder Telephoto series. A copy of the catalogue may be had on request from the VOIGTLÆNDER & SON OPTICAL CO.

THE California Camera Club recently celebrated its tenth anniversary with great doings, at which most of the amateurs of San Francisco assisted. This club has done much good work in photography on the Pacific coast, and is one of the big features of the metropolis of the far West. We are glad to note its active life and prosperity.

MESSRS. HEMPERLEY, DRAPER & CARNELL send an announcement of the opening of their new gallery at 1314 Chestnut St., Philadelphia. The combination of talent here published is a strong one, and we wish them all success.

Catalogue and Bargain List, No. 13, just issued by Mr. RALPH J. GOLSEN, Chicago, is one of the most persuasive examples of cataloguing we have seen in some time. It is profusely illustrated, and the prices are as interesting as the pictures.

THE firm of VAN LOO & TROST, Toledo, Ohio, has been dissolved by mutual consent, and Mr. TROST will continue the business at the old location. Mr. VAN LOO will open a new studio in a business building just approaching completion, and is planning to have one of the finest appointed establishments in the middle West. We hope to give an illustrated description of the new studio in a later issue.

THE G. CRAMER DRY PLATE CO., of St. Louis, announces that hereafter all Cramer plates will be protected with a label on the bottom of each box, giving the time within which the plates must be used if the best results are desired. Their intention in this desirable innovation is to protect users of Cramer plates against old or stale goods, and consumers are warned not to accept *Crown* or *Banner* brands prior to emulsion No. 13,180, or *Isochromatic* prior to emulsion No. 3916.

We are emphatically of the opinion that this is a step in the right direction, and that it will still further increase the popularity of the Cramer plate.

AN OMISSION.—By one of those peculiar slips which will occur now and again, even with the most careful management, the good work done at the Milwaukee convention by the Wisconsin State Association was passed over without formal recognition. This, of course, was altogether unintentional. The officers and members of the State Association did everything in their power for the success of the convention, and their help was warmly appreciated by the officers of the P. A. of A. and photographers visiting the convention.

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Vol. XXXVII. ✣ ✣ ✣ No. 525.

SEPTEMBER, 1900.

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DEVOTED TO PHOTOGRAPHY. MONTHLY: ILLUSTRATED.

COPYRIGHT AND THE AMERICAN PHOTOGRAPHER 385
LENSES FOR LARGE WORK. By H. Lawler 387
BUBBLES. By Dr. P. H. EMERSON 388
PHOTOGRAPHERS AND THEIR PUBLIC. By Drinkwater Butt 391
AN ANONYMOUS CRITIC 396
NOTES CONCERNING PORTRAITURE 398
THE TREATMENT OF THE FIGURE. By John A. Tennant 401
THE BLUE PRINT. By George E. Brown, F. I. C. 405
THE MINIATURE PORTRAIT 407
HAND-WORK BEFORE PRINTING 409
VELOX FOR THE PROFESSIONAL 411
STUDIO BUILDING. By Robert Schouten 418
THE AMATEUR. By F. Bennett 419
"THE PHOTO-MINIATURE." By Edward L. Wilson 420
THE ELIMINATION OF HYPO 422
WORKROOM METHODS 423
PHOTOGRAPHY ON TOUR 426
DEVELOPMENT NOTES 427
HINTS FOR HAND-CAMERA WORKERS 428
THE ALUM BATH. By F. E. Norris 429
JEX BARDWELL'S LANTERN SHOW. By James F. Ryder 430

OUR PICTURES:

"A Willing Model." Platino-gravure from Negative by A. W. Judd, Chattanooga, Tenn.

"Willows." By Gustav Heinke, Friedenau.

Portraits by A. W. and S. Wilson Judd, Mrs. C. H. de Gonzalez and I. Benjamin. The "State Capitol, Maryland," by J. E. Watson.

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THE FAVORITE

By A. W. Judd, Chattanooga, Tenn.

PHOTOGRAPH

Vol. XXXVII.

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THE Art of Photography, as a [illegible] recently appeared [illegible] most whose promises [illegible] ness. The growth and [illegible] State and National [illegible] sions are practically [illegible] has our [illegible] testimonies to seek [illegible] business success. In [illegible] business methods [illegible] professional [illegible] is the great follow [illegible] [illegible] Photo Bureau.

[illegible] with all its advantages and progress [illegible] almost complete [illegible] [illegible] be the first [illegible] and grasp. We refer to the strife [illegible] commercial photographic copyright.

In other countries [illegible] [illegible] in everyday life as [illegible] [illegible] and matter of every sort with which [illegible] are familiar [illegible] largely [illegible] interest [illegible] [illegible] of premium [illegible] [illegible] which [illegible] [illegible] life at home and [illegible] [illegible] and [illegible] [illegible] all these [illegible] [illegible] and [illegible] [illegible] of re- [illegible] and [illegible] [illegible] who [illegible] promises and who [illegible] [illegible] questions [illegible] every photographer answer them for [illegible] and we [illegible] his interest [illegible] in the question of photographic [illegible]

I. FAVORITE

By A. W. [illegible], Chattanooga, Tenn.

WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

VOL. XXXVII. SEPTEMBER, 1900. No. 525.

COPYRIGHT AND THE AMERICAN PHOTOGRAPHER.

THE American photographer, as a rule, is keenly appreciative toward any movement which promises him an advantage in business. The growth and importance of the State and National photographic associations are practical evidences of his earnestness in seeking business success. In his business methods, in his enterprise, and in his professional ability he easily outstrips his European fellow-professional as we have known him in Germany, France, and Great Britain.

But with all his alertness and progressiveness he has almost completely overlooked a business advantage which, of all others, he should be the first to perceive and grasp. We refer to his strange apathy concerning photographic copyright.

In no other country are pictures and illustrations so popular or so important a feature in everyday life as in America. Illustration is, in fact, universal. The daily and weekly papers, the periodicals, and printed matter of every sort with which we are literally deluged at every turn, depend largely for their interest upon illustration. Portraits of prominent people and scenes, pictures which interest as news records or by their pictorial attractiveness, records of incident and life at home and abroad, in doors and out, of work and sport, of humor and pathos—all these are sought for, gathered in, and published far and wide by every conceivable method of reproduction. The public demands pictures, and the public pays for them. But who makes the pictures and who profits by their sale? Here are two plain questions. Let every photographer answer them for himself, and we are sure of his interest hereafter in the question of photographic copyright.

A glance at any illustrated paper will show that the photographer bears the burden of the public demand for illustrations. Nine-tenths of the pictures published in our newspapers and periodicals are direct reproductions from photographs. In how many instances does the photographer profit by this use of his work? We venture the answer: not in one instance out of ten. Why should he not profit by this use of his work? If he equips himself for its making, if he produces by his skill something which has saleable quality, should he not be the first to profit by his skill and labor? Does the publisher furnish his paper to the public without money and without price? Why should the publisher profit by selling the photographer's work, and the photographer be content with "glory?" Does the publisher pay the photographer for the use of his productions? Sometimes, when he is compelled to do so; never, if he can avoid it. Why? Because the photographer has not yet learned to appreciate the value of his work to the world—its plain matter-of-fact value to those who purvey news or information to the public.

These things are worth thinking over. By availing himself of the protection of copyright, the photographer may secure for his own benefit certain legitimate profits arising from his business which at present he permits to go to waste, or, rather, to go for the enrichment of other business men who can turn his product into hard cash.

It must not be imagined that we impute any blame to the publisher. As a business man it is his chief interest to get and reproduce what the public will buy. If he can get his materials without cost, so much

the more profitable will be his business. The mistake lies with the photographer, who is so careless of the sources of income or profit rightly belonging to his business. The remedy lies in a better appreciation of the advantages of copyright and in united action to secure these advantages. If it is found that the photographer is not properly protected by copyright laws at present existing—as is, indeed, the case—there is all the more need for photographers to unite in the effort to secure proper legislation.

We believe that as soon as the American photographer looks squarely at this question of photographic copyright he will perceive its obvious advantages and insist upon his reasonable rights. Therefore, we urge again, as we have urged before, that photographers should enroll themselves as members of the Photographers' Copyright League, and put themselves in touch with the work this League is doing for their benefit and advantage. All that is necessary in order to secure this membership is to send a request to be enrolled, with your name and address, to the Secretary of the League, Mr. Charles E. Bolles, 244 Fulton Street, Brooklyn, N. Y.

The following letters, which we are happily permitted to publish, offer interesting facts supporting what has already been pointed out concerning the practical advantages of copyright to the photographer:

WALDORF-ASTORIA, NEW YORK,
August 10, 1900.

DEAR MR. WILSON:

The accompanying letter from Mr. Elliott, senior member of the well-known firm of Elliott & Fry, of London, should open the eyes of American photographers to the unfairness of our present copyright laws and to the practical benefits accruing to the profession when its members stand together for mutual protection, as they do in England. In no other country of the world do the laws make it so difficult for the photographer to protect his work as in this free land of ours; in no other country is it so easy for the pictorial pirate to steal our labor and go unpunished. The supine indifference of photographers to this state of affairs, and the financial loss they thereby incur, must be quite as amusing as it is profitable to the publishers who thrive upon the photographer's work.

Sincerely yours, B. J. FALK.

HADLEY HOUSE, BARNET, ENGLAND,
July 24, 1900.

MY DEAR MR. FALK:

I have to thank you for your kind and interesting letter of March 19th, and should have answered it earlier, but hoped to be able to tell you that the new bill that is before Parliament had become law. The committee that is sitting on it in the House of Lords has, however (last night), postponed all further action in the matter until next session. In the meantime I am very well contented with the existing state of affairs. Our Photographic Copyright Union, of which I am proud to be the founder, is working well. We met great opposition from the press the first years of its existence, but by continuous fighting and winning some good actions we meet now with no serious opposition. Whenever a newspaper or magazine proprietor or other person wishes to reproduce a copyright photograph he first applies to the proprietor for permission to do so, and pays a minimum fee of half a guinea; if to be reproduced large size, or if it be an important subject, he pays from one guinea to ten guineas for the privilege, though 10*s.* 6*d.* is the usual fee.

The following figures will show you that I have done exceptionally well the first half year with copyright fees:

January, 1900,	£294
February, "	276
March, "	502
April, "	289
May, "	360
June, "	283
	£2004

From the above you will see that I have made just over £2000 by my copyrights in six months. Of course, this is partly due to the war in South Africa. I have the best series of generals and war portraits extant, and I have made about £500 by one portrait alone, that of Major-General Baden-Powell, which has been reproduced in every conceivable way for advertising and otherwise.

And now as to the future. I think I told you when I saw you in New York that, up to the eve of my starting for Japan, two and a half years ago, I was engaged with others in drafting a new copyright bill. It was taken up by Lord Herschel. He went to America and died there, and the bill was never heard of more. Next a bill was drafted by the

Royal Academicians, which was totally against the photographers, but *why* we never could tell, except that so-called artists are jealous of us, and, besides this, a man, who shall be nameless, the manager of a very large *sweating* London publishing business, had a principal hand in drafting the bill. He is one of those persons who like to have the use of other people's photographs for nothing if possible. This bill was introduced into Parliament, and was referred to a select committee in the House of Lords. It is called Lord Monkswell's bill, and, of course, we photographers fought it tooth and nail. I, among others, gave evidence before the committee. The Photographers' Copyright Union got every amateur photographic society in the kingdom to petition against the bill, and the Union did other excellent work, with the result that during this session the bill has been redrafted *entirely in the photographic interest.*

Photography is put on a par with painting, etc., in fact, it is alluded to as a "fine art." The term of copyright is for life of the photographer and for thirty years after death. The photographer is proprietor of the copyright, whether paid for taking the picture or not, only in the case of payment the photographer cannot make use of the photograph in any way without the consent of the person who gives the commission, until after his death. But the principal feature in favor of the photographer is that it does away entirely with registration—the bill is a model of conciseness and simplicity. It has been read a second time in the Upper House, and has been sent to Canada and Australia for the approval of the Colonies, and there is every prospect of its becoming a law next year.

In the meantime, as I said before, we are going on here remarkably well. I wish I could compliment you on the way you are going on in America. Anything more deplorable than your description of the state of the law of copyright with regard to photography it is difficult to imagine, and I can only sympathize with you with all my heart.

Hoping for better things for you in the future, and with kindest regards, I am,

Yours, very sincerely,

(Signed) Jos. J. Elliott.

LENSES FOR LARGE WORK.

BY H. LAWLER.

Large direct portraiture, if well handled, is a very fine specialty, and one with much possibility of money in it. Too much of our large direct work is in the form of full-length subjects, and except in texture it has too much resemblance to an enlargement from a smaller negative. One of the causes most helping to success in this line is a knowledge of the right lens to use, and on this point there is much misconception. To purchase a studio lens of modern and approved make, to cover 17x22, or a size larger, means hundreds of dollars.

There has been much written lately, and not without cause, about faulty perspective, or, as it is called, distortion. This is a pure matter of economy, which necessitates the working of a lens to its fullest capacity, or even a size beyond, and the camera being brought close to the sitter. If a man could use a larger lens, worked with a wide-open aperture he would improve his work, but this means using a lens calculated to cover a plate larger than the one used. Instead, we are driven to using a lens intended for a smaller plate, and gain our size by excessive stopping down.

Why should the portrait lens be such an absolute necessity? In the old wet collodion days the slowness of the process made a large lens aperture a necessity, but with the dry plate we have a much increased rapidity. The advantage of a rapid lens is in dull weather only, or for taking restless children. Take a lens which will work at $f/7$, and if it is stopped down to $f/11$ it is no more rapid than one whose greatest speed is $f/11$. And if the light is such that the lens can be worked at $f/11$ it will be worked at that figure on account of the greater depth of definition. A rapid lens should be included in every photographer's outfit, but it is not necessarily the best for every class of work.

We are just beginning to hear much of the distortion so apparent in large photographs. To obtain pleasing and correct perspective the equivalent focal length of a lens should be at least double the longest dimension of the plate. That is to say, with a 12x15 plate we should have a camera extension of at least 30 inches. This allows the camera to be placed much further from the sitter, and the need of it has quite recently led to the making of a special tele-photo lens for studio work, to take a portrait at a distance of twenty or thirty feet.

There has been what is, in some respects, an ideal lens for large work in existence for so long that it is almost entirely forgotten. I mean the old single landscape lens of almost half a century ago. These old lenses, usually plano-convex, used to have a fixed aperture of about *f*/16, and they gave good sharp definition over an area of two-thirds their focal length. That is, a lens of thirty inches focal length would fully cover a 12x15 plate to the corners.

F/16 is rapid enough for most work, but if the stop were bored out to *f*/11 it would still cover half its focal length, say a 10x12 plate in the case quoted, and bored out to an absurdly large aperture it would still give acceptable definition in the centre of the plate. One of the highest priced photographers uses one of these large lenses almost exclusively on his 5x7 plates and considers it one of his most valuable secrets.

Whether new school or old, we will all concede that it is possible to get a large portrait with too much sharpness. The very use of platinum paper, or of any matt surfaced paper, even in very small sizes, is a protest against excessive sharpness. To use any old single lens, capable of covering a plate much larger than the one used, does not give excessive detail, but it *does not* give fuzziness. For "pictorial" results they may be worked at *f*/5 or *f*/6, but at *f*/11 they are good studio lenses. There is a common belief that a doublet lens, or even a portrait lens, is an absolute essential. But this is a mistake, for intelligently used, the old single lens will give results which will not only surprise the photographer but which will please the general public.

BUBBLES.[1]

BY DR. P.-H. EMERSON.

SOME of you may remember *A Study in Gum*, by an American, published in *Photograms* for 1899. It was a rather awkwardly posed girl showing a "sticky back;" and I hope some can remember a much more perfect girl's back by Mr. Fellows Wilson in last year's Royal Exhibition. The two portraits will serve well as a comparison of the bad and the good.

It is now almost universally acknowledged by artists that the one distinctive and precious quality of a good photograph is its delicate gradation (hardly to be equalled by any other black-and-white medium), and its power, for certain subjects, of rendering texture.

The study in gum referred to gives us a back that looks as though it suffered from a bad attack of eczema, and yet we are told that this is what we are to line up to, that this is an advance, that this is Art.

Now, before we accept these mentors we want a reason (artistic) for changing our opinions. These gumists may shrug their shoulders and squeak and gibber for "perfect freedom," and shrilly ejaculate, "Art!" But we will not accept such shifty arguments. It is useless crying liberty when there is no liberty. We are hard bound by the mechanical conditions of our craft, and if these workers require that "perfect freedom" which they are always crying for, let them become artists and adopt media where there *is* perfect freedom, and leave us poor photographers alone.

Again, some of you may remember the photograph of a quite commonplace *River Scene at Hampton Court*, frame and all. The sail is altogether wrong in value, the water is woolly, and the photograph is as bad a bit of river scenery as it has ever been my lot to behold. Compare with this the neat little seascape, *Landing Cattle at Morocco*, exhibited at the Royal. In

[1] Read before the Photographic Convention of the United Kingdom.

this latter we have true value, delicate gradations, unobtrusive forms, fine texture, and no frame.

These examples will serve well to illustrate what a section of the photographic world are giving up for a mere smudge, false in every pictorial essential.

I may be told these are not fair examples, but others could easily be produced. In all the best gum work I have seen these essential and fundamental errors abound.

Now, in looking at the examples of fine carpentry or cabinet-making, shall we say, in which these precious daubs are enclosed and afterward photographed, one is constrained to think that the ideal these amateurs set before themselves is to produce something like a *photograph of a painting*, and they imagine this is progress, this is art.

All of us, even the youngest, are liable to err, so I was careful to place a number of these gum-caricatures before one of our best painters. Shall I ever forget the jeering guffaws with which he picked up the prints; and, having been in France a good deal, he said, with a wicked smile, "Ce sont des articles de Paris," for the names of some well-known French daubers were beneath them. Now, it seems to me this "gum" printing is one of the greatest bubbles floated upon the limpid stream of pure photography, or pictorial photography, or whatever name you may be pleased to call it.

Those who would have us sell our birthright for a mess of gum will, I feel confident, never succeed in their object; and, when they talk to us of art, I for one, will burst into mocking laughter at their solemn pretentiousness; and I regret to see among their number some who used to glibly talk of "subtle tonality," "values," etc.—evidently gum-paint cant on their part—and I should like to know what the young woman with the sticky, diseased-looking back thinks of the outrage. I'll warrant her back is far more lovely than such a sickly representation of it.

France has given us much in true art to be thankful for; but these *bourgeois* French photographers make us begin to wonder if the seeds of Philistinism are there, as the seeds of political and social decay are there and strongly sprouting. As I have said elsewhere, at the last Paris Exhibition I could only discover that Scandinavia had struck any new note in art; and perhaps, after all, art itself in Paris is merely imitating a splendid tradition, and so becoming as sterile as its population. Such things have repeatedly happened in the history of Art; but I, for one, hope fervently that those ridiculous photographic travesties are perpetrated by the uneducated Philistines of that country, and a French Philistine is hard to beat. One of these scribbles a deal and causes us much amusement, and thus adds to the gaiety of nations, and gives artists such as Mr. J. Pennell a fine subject for satire.

To sum up this point: the gum process destroys tone, texture, and with it values and atmosphere; it makes the result coarse and false and to look like the photograph of a painting—a *pis aller*, which is merely a rough index of the painting, and which no real artist is satisfied with or cares a toss about, except merely as a rough and crude memorandum to keep when he has sold his picture; and some prefer a simple pen-and-ink sketch for the purpose. And, lastly, it is hand-work, and not photography. Another bubble of less pretentious size and less objection is the "dodged printing fake," for sometimes that might come true, but it rarely does. I have been greatly amused to read, in a shilling guide to pictorial photography that the greatest care must be taken in selection of the view, and in exposure, etc., so that the values may be true; and straightway he gives a ponderous apparatus for "faked printing," and advises the use of clouds taken with a small aperture, an error I long ago warned the operator against. His advice continues in the same vein—that is, to "sun down" the print, and in his work he does not hesitate, by scraping the film or some other dodge, to make garish highlights. In short, his chapter on printing is a pocket encyclopædia of how to ruin values, and often textures, and all this after telling us to work in the initial stages most carefully in order to secure true values!

Dr. Hurter and Mr. Driffield show us how to do that scientifically, so far as exposure and development go, and I have endeavored to do it with regard to other matters, and what is the result? The same issue of *Photograms* contains a print produced by this "sun-downer," and I ask you frankly, "Is it art?" It is certainly

false in many respects, has a meretriciously deceptive appearance to the unwary, and deceives the amateur. But what has the landscape painter to say to it? I showed some of these prints to a great landscape painter, and he simply asked, "why the fellow did them; what was he after?"

I ask the same question: If pure photography is not good enough or "high" enough for such as he, by all means let him become an artist, and leave us alone and not try and foist "fakes" upon us.

I suppose the fakers appear in all arts—*il faut être dans le mouvement*, dear boy; "must conspire with 'notions,'" like the cheap-jack; "when one stock of rubbishy goods fails, must bring out another, old friend," I suppose is the explanation. It's commerce, but is it art? It isn't photography. We all remember a painter who tried the faked photo dodge, using photography as a basis; we all doubtless, remember what his fellow artists said; and yet he is the prince of photo-fakers, if he care to assume the title; and the poor "sun-downers" are far, far behind him at the game.

I do not suppose you, I, or any sane man cares one brass farthing or the proverbial "two penn'orth of gin" what our fakers do in the faking line if they only don't pretend to us it is something new, something we are to follow—"Art, dear boy!" The British public *will* have the fake of retouching, and the photographer must live; but we should think him an ass did he begin to shout and yahoo that he had found the recipe—the new recipe, mind you—*the* solution of the pictorial photograph—in faking.

The appreciator of the gum-plaster and photo-faking is, doubtless, the type of scribbler who is responsible for foisting the sickly monstrosities of Aubrey Beardsley upon the unwary public, and for driving Mr. Whistler abroad, and for causing dishonest dealers to cover old and worthless pictures with white of egg, and let this dry in cracks to cheat the ignorant, another form of gum-work, in fact.

Returning now to the two principal exhibitions of last year and to *Photograms* of 1899, one meets with the gum landscape of an American. Now, if this conveys anything to any one, I ask to be instructed. A meaningless smear is said to represent *Mountains in North Carolina*. Now, it is said Americans do things on a big scale; but, to judge by that plaster, the mountains of North Carolina look very much like a photograph of a scrubby English hedge that has been "treated" by a good brawny British road-scraper who has set about clearing the country-side up. So much for the great rushlight of the American school. Mr. Steiglitz and Mr. Day are the best exponents of American photography, and I rejoice I've seen no gum-plasters or fakes by either, and I hope I never shall. Then we have the French "school" and its infants. In *A Spring Snow* we find the composition is childish; in *A Lark Shooting*, which might have been good had it been pure photography, though it only proves the Frenchman as ridiculous at *le sport* as M. Tartarin, of Tarascon, the coarse daubs of white, and lack of tone value in what might have been a beautiful and delicate distance, ruin it, and prove the 'prentice hand. Next we find another worker's theatrical and ill-posed woman. They recall the sweepings of the worst type of Paris *atelier*. The chief interest is that this amateur has an island where he retires with his models, an idyllic picture that makes one long Mrs. Grundy were dead and her soul gone to Paris. This series finishes with two commonplace, most penny-plain peasants, *Returning from the Fields*, and *A Study*, a young woman performing athletic feats with lilies; and all along with this jumble of inanities we have the most solemn, inane, and pretentious letter-press by the great and original gum-splodger himself. It is, indeed, a relief to turn to the manly and healthy works of our Colonial brethren in New Zealand.

But to continue. Of what avail is such a picture as that hung in last year's Royal, *In June*?—woolly trees, degraded lights, impossible grass—and all to represent June, the glorious month of light and leaf. The photo looks like a miserable December evening, with the leaves as though suffering from cell congestion. Another equally bad Salon companion picture was a *Gleam of Sunshine*. "Subtle tonality," again, I presume—only gone wrong. As dismal a sun as one could expect in Hades.

I appeal to you, is this photography? I am sure it will not last—cannot last; and we will welcome the new parlor biographs, if only as a sure and certain kill-all for these pretentious bubbles.

A painter and I sat down one night to select, from the publication referred to, what we considered the two best photos in it pictorially, and what think you they were? Mr. Tingley's *Light Beyond* and Mr. Campbell's *Messengers of Death*, and, lo! we found the latter was included in the *Technical Section*. On the other hand, the very worst in the book—to which we adjudged, too, the wooden spoon—was *A Pond at Weston Green*, which seemed to us to possess every ill that photography is heir to; and this to me was all the more regrettable since the producer of that abominable daub *has* done some beautiful things in pure photography and platinotype; and may he renounce false gods and return to the style of his saner days.

There was a time when the great bubble of sharpness enveloped the photographic world, but that has burst, and the explosion thereof seemed to have upset the sanity of some who have been carried away in the explosion and lost all reason and sense, all tone and texture, those vital and great qualities of photography.

Another bubble that seems to get into the eyes of some of our chemical friends, and which they are constantly playing shuttlecock and battledore with, is the "control in development" question. By all sorts of high-sounding devices they are constantly telling us how they can modify results, and, therefore, say they, P. is A., or Photography is Art. Now, our good chemical friends are the most respectable of men—the fathers of families, eke churchwardens—but they have never even yet told us how by stirring up something we can make one specific tone lighter as against another. They give us varied results which have no real bearing on the issue at all; but, until they can tell us how a certain wall (say) is to be made lighter or darker as against a certain other wall, and the rest of the picture to remain *in statu quo*, they cannot legitimately deduce P. is A., or else they are but logically arguing after the manner of cause and effect of Tenterden Steeple and the Goodwin Sands.

This is a small matter to them, perhaps, but it is of fundamental importance concerning the point at issue, and Dr. Hurter and Mr. Driffield told me it could not be done; and, until one of our friends does it, I shall continue to say P. is not A., and add Q.E.D. after the manner of dear old Euclid.

I claim no originality in further destroying these bubbles. I have let them grow and grow, unopposed by me for years, to see if they could give us a new and valuable hint of any kind; but are they doing us any good as a body? We have been held up to ridicule by an able artist, Mr. J. Pennell, in one of the leading reviews; by an artist who was a photographer, and I trust the home truths in the perhaps unpalatable article to many have not been forgotten, though the writer went too far to prove his case, but he said many truths that should not be allowed to drop, for it must not be thought he had any ulterior motive. That I don't believe for a moment; the pretensions in framing and daubing would naturally arouse the ire and sarcasm of any good artist, and many artists know I have said similar and worse things than Mr. Pennell enunciated. To many of us his remarks in no way referred; and if any of us wish to gain the esteem of artists, and, in the long run, of photographers as well, I feel sure the abjuration of all these illegitimate and resuscitated "fakes" is the only royal road. And it delights me to find the responsible press of the photographic world has sternly set its face against such humbug.

PHOTOGRAPHERS AND THEIR PUBLIC.

BY DRINKWATER BUTT.

NEXT to the quality of the work which he produces, nothing is of more importance to the professional photographer than the manner in which he introduces it to his public with the object of obtaining their patronage. The following notes on some of the ways in which this matter is approached in actual practice have been compiled by the writer from personal observation of most of the leading London and many of the more prominent provincial studios, and are here offered as an in-

centive to the further personal consideration of the subject by the profession generally.

There has been reported—I forget where at the moment—the saying of a very successful commercial photographer to one no less eminent in the artistic quality of his work, "You take a first-class picture and a second-class order, while I take a second-class picture and a first-class order." If not apocryphal, this goes to prove that commercial success depends as much, if not more, upon how a man's work is exploited as upon the actual quality of the work itself, and so in these days of keen competition the photographer cannot give too much care, pains and consideration to the manner in which he places his productions before possible clients.

Now, the first and most obvious way of doing this is by the display of specimens in windows and show-cases, and here in practice we find a great variety of methods and results. In some photographers' windows will be seen, year in and year out, just one class and standard of work, with no effort for improvement and no apparent perception of the advent of new styles and fresh processes. The worker has got into a groove, and so goes on, day after day, producing in endless monotony the "usual thing," and if you remark upon it he will generally reply that it has always done very well, and that he has neither time nor money to spend on improvements or efforts to do anything different, especially, as he will explain, now that times are so bad—quite forgetting that they might get better with him if he had some better and more varied styles of work to offer to his customers.

In other places, on the contrary, one finds all the latest processes employed and exhibited, and a considerable variety of work always on view—something, in fact, to appeal to and please everybody; and, although it is, perhaps, at present too much to expect that the general public will always choose that which is artistically and technically the best, yet the fact of its being shown and readily obtainable will in time create a demand for it. In proof of this it is only necessary to note the facts that in the better and more prosperous class of studies the demand for warm, soft tints and matt surfaces has increased with the facilities for obtaining them, and that now carbon and platinotype are slowly but surely ousting the shiny surfaces and generally unpleasing tints of toned silver prints. There is, perhaps, now only one of the principal establishments in London which makes a special feature of enamelled work, and even there the warmest possible tone is consistently employed, and, of course, all the other processes are obtainable as desired.

Next to variety of work being a desideratum, experience shows that it needs to be well displayed, and here there is great scope for both judgment and artistic taste. In some places, especially where there is plenty of window space, one finds a very large quantity of work exhibited without sufficient attention being paid to its quality or variety, and examination of some of these multitudinous displays, and comparison of them with others of more moderate extent, produces the opinion that it is very easily possible to have too much.

Among a very large number of pictures, some, at least, must necessarily be of more or less inferior quality, and these lower the general average of the whole effect, besides which the eye becomes wearied by looking at so many, and some of the best work may consequently escape attention. In the highest class and most flourishing London and provincial establishments a moderate show of the best work produced, sufficiently varied, of course, to indicate the scope of the business, seems to be the best and most successful method, and it is usually only in second-rate places that one sees rows upon rows of work all similar in size and style and at one universal dead level of monotony. The provincial photographer has often the advantage of his London *confrère* in possessing a moderate-sized and well-lighted window in place of of the show-case or two, or badly lit entry, with which the latter has often to be content; but, on the other hand, he has to keep his specimens more constantly varied, as he has not the ever-changing flow of passers-by to see them that the metropolis affords. Every one is fond of pictures, and the photographers' windows of small or moderately sized towns are often the objects of regular visits by the inhabitants, and I have repeatedly heard such comments as, "Oh! do come and look; here's a new portrait of Mrs. A.," and "Don't the Misses B. look nice!" and "That's a

good picture of Mr. C.," and so on through a whole alphabet of admiration and interest, concluding with, "It's always worth while to come and look at Mr. Uptodate's windows;" and have contrasted them with the "Oh! come along; there's only that old picture of Mr. Mockturtle when he was Mayor the year before last, and old Lady Dowdy and the Misses Asper Usuals; Mr. Dryasdust never has anything fresh in his window" as heard before other establishments. The display of photographs of topical interest is always an unfailing draw, and when we go down Prince Regent Street we always stop in front of the Universcopic Company's window to see the latest portrait of General Lord Buller, now at the "front," or that of Miss June in the *Bells of London*, and so on, and some day we go in to be photographed on our own account, so well has what we have so often seen impressed us.

Another desirable point with regard to window displays seems to be that all work above cabinet size should be suitably framed. Comparison of places at which this is done with others at which it is not results in favor of the former as regards finish and completeness of effect, and the method has also the advantage of not only often bringing to the photographer a profitable trade in frames, but also of enabling him to see that his work is suitably and artistically framed before it leaves his hands, instead of afterward being entrusted to the tender mercies of the average framemaker, whose ideas are too often limited to some spiky "Oxford" abomination, or an ill-designed combination of fussy and misplaced ornament. Suitable mounting should also receive more careful attention than it very often does at the hands of the photographer himself, who usually keeps but one or two varieties of mounts in stock, and places everything, with but very little discrimination, upon them. This is not the place for an essay upon mounting and framing, but the importance of the proper study of both these means of improving, finishing and setting off our work cannot be too strongly insisted upon in an article on its exploitation. I know at least one London establishment in which the neglect of proper mounting does much to spoil what would otherwise be a good window display. The work is of generally good quality, and mostly printed in platinum; but the greater part of it being done by electric light—and often, doubtless, with a certain amount of London dust and fog in the atmosphere—some of the prints are not as brilliant as others, but all alike are mounted on white cards with fairly wide margins, which, of course, compete severely with the high lights of the flatter pictures, and so produce a generally unsatisfactory and inartistic effect, which is still increased by the fact that the shop-front is also of a brilliant white—not a bad color in itself for the painting of photographic premises, but in the present instance not going well with the white mounts and many white frames of the exhibited piclures.

This brings us to the consideration of the style and color of shop-fronts and of windows and their fittings as influencing the impression produced by photographers' works upon their public. The worker, being usually only the tenant of the premises he occupies, has but little control over their architectural features, but when taking a place he will do well to choose something not too elaborate and with not too much polished granite, shining metal, or carving about it, all of which will tend to swamp and depreciate the artistic value of his work. Fairly dark and unpolished natural woods form usually the best setting for photographs, both in frames and shop-fronts, and the very simple yet effective oak doors and windows designed by Mr. George Walton for the Eastman Company's Regent Street branch may be cited as good examples of the right thing. For painted fronts black and gold is often dignified and unobtrusive, and white of a warm tint in conjunction with a dark Indian red may be sometimes effectively used. For show cases hard woods and simple mouldings are always safe, but elaborate carving and metal work are to be avoided. I know one establishment at which the cases are so carved and ornamented with *repoussé* work that it is almost a puzzle to find the photographs concealed therein. With regard to window fittings, the photographer who desires his display to always look well should have two or three different sets of draperies, etc., so that they can be varied to suit and harmonize with the show of the moment. The draperies (by which I mean any necessary curtains and coverings for stands and not a lot of useless frippery) may be of silk, plush, velvet, or serge, of

which all tints are obtainable, and besides these a few pretty easels and stands are all that are really necessary. The man of taste will avoid quantities of palms, ferns, china monsters, pots and tiles, to say nothing of such things as the *stuffed kittens* which I recently saw in a photographer's window! Before leaving this part of the subject it may be just noted that one at least of our best male and one of our most patronized lady photographers do without outside display of any kind, conducting their businesses in what are apparently private houses, in which they receive their aristocratic clients, a dignified and quite professional method, but one not always possible for lesser lights or for the more frankly commercial side of photography.

It ought to be hardly necessary to insist that whatever specimens are shown should be the actual work of the establishment showing them, but it apparently is so when one finds even good photographers displaying work obtained from other sources; while, at the lower end of the scale, I have seen the work of well-known men unblushingly placed outside a very fifth-rate establishment in a London thoroughfare, and we all are familiar with the advertisements of and for specimens which frequently appear.

Other methods of approaching possible sitters are to be found in the distribution of advertisements, circulars and price lists. With regard to the first, it appears to be doubtful if general newspaper advertising is of much benefit to the artist, whose best advertisement is the quality of the work sent out bearing his name; but, in the provinces especially, an occasional announcement in the papers under such circumstances as the taking or removal of a business, additions to premises, or of topical reference, or a well-printed and well-worded circular making such things known may be of advantage. Circulars should be sent by post, enclosed in a good envelope, and addressed in a good hand with the full names of the persons they are intended to reach. I regret to say that many of the specimens of this class of literature which I have seen have been not only badly written and ungrammatically expressed, but also very badly and inartistically printed; and such things, sent in a halfpenny wrapper, and roughly addressed, "—— Smith, or occupier," are almost certain to find their way into the W. P. B. (For the meaning of these cabalistic letters, apply to the editor. He is used to giving other things besides circulars decent burial therein.) Of the price lists of London and provincial photographers I possess quite a large collection; but very few of them, even those of the best houses, are ideal productions, some being badly printed, some giving too much information, and others not enough. An artistic business should surely have its accessories of an artistic nature, and really good printing is but very little dearer than commonplace, not to say common, work. It is surprising, too, how very few photographers have taken advantage of the possibilities of collotype and the half-tone process for the illustration of their price-lists and circulars, though those who have done so have certainly benefited by so doing. A picture or two on a circular or price-list may not only lead to their preservation, but also place specimens of the photographer's skill in posing and lighting directly into the hands of possible sitters; and I can speak personally of the benefit of adopting this plan of doing so. The class of price-list above alluded to as giving too much information is that in which the photographer appears to have taken a delight in making everything as complicated as possible, and quotes you different prices for vignettes, half lengths, three-quarters, and full lengths; for groups of two, of three, and of more persons; for silver prints, platinotypes, and carbons (not to mention a few processes with barbarous names of his own invention), with extra positions, resittings, further copies, etc., all jumbled up together until the whole is a maze of words and figures that may well repel the possible or intending sitter. By all means let all desirable information be given, but let it be properly tabulated and clear at a glance. The price-list that does not give enough information is, if anything, worse than the redundant and muddled one, and none is complete that does not clearly state the terms on which business is done, cash or credit, the number of positions taken, and the conditions of resitting. The exact understanding of these things beforehand, and the printed statement of them for reference, would often save much after-friction and trouble.

And here I wish to put before my brother

photographers a system by which not only would price-lists and business be simplified, but the ever-vexed questions of number of positions, proofs, and resittings be solved. It is to do away altogether with the arbitrary "first dozen" price (which has often the effect, even when the photographs are much approved of, of limiting the order to the said dozen as originally paid for), and to abolish the changes for "extra positions" and "resittings;" putting in the place of all these: "First copies, to any number of desired positions, sittings, or costumes, so much each," and "further copies of them, so much each." "First copies to be paid for at the time of sitting, and further copies at the time of ordering." Then the fussy or faddy customer could sit and resit, or come in as many costumes, or have as many positions taken, as she (it is usually she) desired or was willing to pay for; while the photographer would be paid in exact proportion to the work done (and why not, messieurs?); and both the profession and the public would be on a better footing. The writer has used this system with very great success when working for the dramatic profession, and has no doubt that any good photographer adopting it for his general work, and taking a dignified stand upon it, would find it answer equally well. The differences of price for groups of two, three, or more figures might also be done away with, for, although they contain more heads to retouch, the size of such heads is smaller in proportion, and there would then be only the matters of size and printing process to complicate business and the price-list. With regard to printing processes, all silver prints, whether in albumen, gelatine, or collodion, might very well be classed together, and carbon and platinotype have but one price in common.

Next after the price-list the attention of the would-be sitter is taken by the receptionist, on whose possession of good business ability and tact much of the obtaining of good orders depends, and, therefore, the importance of the photographer being well served in this department cannot be overrated. In a lengthened experience I have met with receptionists good, bad, and indifferent, and, while the latter appear to predominate, the former are certainly born and not made. I have seen those who had every detail of the business at their fingers' ends, among these being, curiously enough, a smart little maiden still in short frocks, whom I recently encountered in the reception-room of a fashionable photographer, and others who could not answer the simplest question without reference to book or price-list, and were completely nonplussed at an inquiry respecting an enlargement or a miniature. How a photographer's relations with his public are thus affected it is easy to see, and happy is he who possesses a wife or a sister to attend, *con amore*, to this part of the business if he is not lucky enough to have one of the born receptionists above referred to. The desirable qualities are, of course, knowledge of photography and its possibilities, plenty of tact and business acumen, good manners, and a lady-like and pleasing appearance, all of which it is not always easy to find combined in a single individual.

Another thing that has often an effect on the possible sitter is the condition and appearance of the shop or reception-room. Here over-elaborate embellishment and decoration are out of place, as tending to dwarf and swamp the effect of the work, and as giving to some sitters the idea that the prices asked are as much to pay for all the show and glitter as for the photographs they will receive; but these interiors should be quietly pleasing and unobtrusively artistic in effect; well lighted for the easy examination of specimens; fitted with comfortable seats and conveniences for waiting sitters and their friends; and, above all, perfectly orderly and spotless in their cleanliness. It should be superfluous to write the last clause, but judging from some places I have recently seen, and those not of the lowest class, it apparently is not so to offer such advice to some practitioners. When the specimens shown become soiled, or in any way *demodé*, they should be at once destroyed, as a faded or damaged print is doing more good among the residues than on the reception-room walls; and anything like litter or lumber should be scrupulously avoided. If possible, no work of any kind except the book-keeping should be done in the shop. There is an old saying that children and fools should never see things until they are finished, and without insinuating that those of a photographer's clients who have outgrown the first category are to be placed in the second, it is more likely that they will be more pleased with work which they first see only

in its completed condition than if they behold it in any of its crude initial stages.

This, I think, also holds good with regard to the sending of proofs, which, if perfectly finished photographs, are far more likely to obtain good orders than the unretouched, untoned, and untrimmed prints which some photographers place before their clients. If the system of charging so much each for "first copies," as above suggested, were carried out, they would, of course, be perfectly completed prints, and the photographer could afford to make them so. If, however, a man shows no more respect for his own work than to submit it in a rough and unfinished condition he can hardly expect his clients to receive it with a greater amount, and so business suffers in the end. It also appears to me that the same effect must be produced by the indiscriminate giving of "free sittings," indulged in by some photographers on the off-chance of obtaining a subsequent order, which is surely an undignified and cheap-jack method of business, and if of momentary benefit to an individual probably injures him in the long run, and certainly lowers the status of the profession as a whole, which is the last thing that should be assisted by those who are proud of the calling they follow and desire to see it keep its proper place among the useful arts.—*The British Journal of Photography.*

AN ANONYMOUS CRITIC.

MR. EDITOR: It is contended that the women who contribute to periodicals on the subject of "Child Training" are spinsters, and that the men who discourse on "Success in Life" are glad of the opportunity to earn a-penny-a-line. My justification for entering the list as a photographic critic is based on a similarly secure foundation. While my occupation brings me in contact with photographers and their productions, yet what I do not know about the making of photographs, if concentrated in any one man, would result in a greater photographic genius than even Professor Griffiths has dreamed of in the highest flights of his fancy. Beyond exposing a few Cramer plates which I had to beg others to develop and print from, I have never done a thing in the direction of "taking pictures." But I attended the Milwaukee convention and gave most of my time to the inspection of the exhibits. I viewed the displays just as any ordinary person not in the business might do, and my impressions may interest those who try to please other ordinary persons who patronize the photographer's studio.

My special delight is a *genre* picture, and I greatly admired the set which received the grand prize; but the excuse for the existence of a critic is not to praise, but rather to find fault, so I pass to the easier and more congenial task.

There was a figure of an old man, with the title "Fame." It seemed to me that a modern shirt, turned-down collar, and frock coat worn by a man with a laurel wreath about his head was very incongruous. I imagine it must have been very inconvenient for the elderly gentleman, when occasion required it, to wear his hat; and I am much worried whether a silk stove-pipe or an ordinary crush felt hat was considered most in keeping with the balance of his subject's costume by the artist photographer.

In a neighboring exhibit was a pleasing picture of a "Pilgrim Father," with his wife and children, walking through a wooded path. The costumes seemed historically correct, being those of about three centuries ago; but in the background could be seen the roof and steeple of an immense church. Now, I am sure a venerated Puritan who wended his way, gun in hand, through "the forest primeval" could hardly have attended services in such a structure. Another picture, entitled "Memories," had as one of its most important subjects a little child with a green-apple-colicky expression on its face. The idea of a child of very tender years indulging in memories! Why not have a middle-aged man, quite sane, playing skip-the-rope?

A "Philosopher," of course, must have unkempt hair and a scraggy, untrimmed beard. It never occurs to some photographers that a man who thinks clearly and cleanly would be quite apt to have some regard for personal tidiness. Look at Emerson's portrait, and see whether it indi-

cates an aversion to soap, a fine-comb, and a clothes brush. An "Artist" must of necessity, in *genre* pictures, be similar to the "Philosopher" in general appearance.

These bearded philosophers and artists remind me that I made an exact count of the number of men's faces portrayed in the displays at the convention and the number of those whose faces were not hidden in hirsute underbrush. Unfortunately, I lost the memo of these figure, but I believe that the proportion of bearded faces was 96 per cent. of the entire number.

Suppose a scientist from Mars who made a specialty of physiognomy had come from his planet, and learning that the photographers of America, with representative pictures of their fellowmen, were in convention assembled, and realizing further that here was a most excellent opportunity for studying the faces of earth's inhabitants, had gone directly to the exhibition rooms, what would have been his conclusions? *First.* That the number of men as compared with women is about as one to forty. *Second.* That the number of men who wear beards is very large. *Third.* That the men who do not wear beards are extremely homely. *Fourth.* That there are no young men, or that they are too hideous to portray.

And in correcting the wrong conclusion of this Marsian scientist, how would we explain the peculiar conditions which confronted him? Something like this: A year or two ago a photographer was awarded the highest prize and was greatly lauded by "Art" professors for making a portrait of human hair. Of course, a couple of eyes, a patch of forehead, an impression of a nose, and a bit of ear were thrown into the picture, as we Creoles say, "for lagnaippe." And now, nearly every photographer ambitious for convention honors photographs human hair incidentally attached to male heads.

The Greeks and Romans, whose art is still the admiration of the world, found beauty in the young man. It seems to me that a twentieth century photographer would probably obtain some credit for originality by placing before his contemporaries' portraits of comely manhood, not necessarily always of those described by Milton "with unrazored lip as smooth as Hebe's," or the other extreme of luxurious whiskers. There are often faces of men—men in early and middle life—full of character, and yet handsome, just as much "a thing of beauty and a joy" as any woman's face. And for this reason just as worthy of portrayal as any of the Senator-Pefferschool of facial extinguishment.

If photographers see so much of beauty in patriarchal beards, why do not the prominent ones among them wear them? They do not do so as a rule. Take as an illustration some of those prominent at the last convention. President Stein—well, it is not fair to use him as a horrible example—for I agree with his charming wife that he was much handsomer when he wore flowing Burnsides. Look at the ideality of Professor Griffiths' artistic moustache. Would anyone be interested in his remarks if they issued from a sort of mammoth hair-duster? The judges of awards, two of them, Commodore Steffens and Colonel Strauss, did not have a single hair to hide the facial expressions which were called forth by the difficult and ungrateful task of selecting 131 exhibitors not entitled to prizes. And even Mr. Somers, who is somewhat inclined to beards, plays only the lowest limit in that respect.

Whiskers are not an American institution, and photographers ought not to misrepresent our nation's men.

[The signature attached to the above is illegible, but the letter accompanying it proves that the writer is "without prejudice," and we therefore publish his wail *pro bono publico.*—ED. W. P. M.]

Hammer's Little Book has reached a fifth edition, and comes to our desk in a neat cover of black, red and gold. The contents of this most useful of helpers has been wholly revised and brought to date. The book may be had by addressing the Hammer Dry Plate Co., St. Louis, Mo., and we advise all our readers to secure a copy.

Monckhoven, the well-known manufacturer of carbon tissues, has placed a new variety of tissue on the market which is said to admit of the making of direct enlargements on it without the usual enlarged negative.

NOTES CONCERNING PORTRAITURE.

THE following extracts are taken from papers published many years ago. They are reprinted as containing some of the best teaching available on the subjects of which they treat, and also as preferable to much of the current tommyrot about art in photography.—ED. W. P. M.

BREBNER ON "LINES."

Study the human figure. Avoid overcrowding and false accentuation as much as flat surfaces and empty, uninteresting spaces. Mark, above all, the exquisite unsymmetrical balance of the human form. See how one line of position alternates with two lines of direction, and *vice versa*. Note the excessive difficulty in ever getting two parts, which in nature are the same, to assert themselves with equal force at once. Look at the utter absence of sharp angles, of right angles, of straight lines, and of perfect circles in nature. Since the forehead surrounds the eyes, the cheeks, the nose, the jaw, the mouth, and so on, I infer that a comparatively clear expanse should be allowed near every point of interest. This expanse may, indeed, be without limit if the point of interest is to be looked upon as an isolated fact, and together with the absence of angles between the subject and the bounding lines, which such a treatment implies, affords the best explanation of the exceptional beauty of a picture whose subject is entirely within the canvas, and also of a vignette which imperceptibly fades into nothing. On the other hand, this expanse must be carefully limited where the subject is to be considered as a compound one, as in the case of an historical picture containing many figures, or a portrait embracing a head and two hands, where each point of interest forms a line of position having a very intimate relation to the others, when too much consideration cannot be given to the lines of direction which bind them to each other, and determine the beauty of the curve which I have called the principal or leading line of the entire picture. For this reason it is that we insist that the dress must be intermediate in tint between the brilliance of the high lights of the face and the shadow of the background, or, as in the case of the vignette, be intermediate in contrast as compared to those of the head, for it is by such treatment alone that we can ensure a broad, swinging, leading line to the entire composition. It is for this reason, too, that we do not allow any point or line of importance to impinge upon any bounding line, and thereby to add a false quantity to the concrete design, nor permit of the exit of any leading line of direction at a right angle to any of the lines inclosing our subject, unless we cannot possibly help it, as is the case where we have a three-quarter length figure of a man standing. This it is that determines that a mountain shall not be cut off either at its base or at its summit, and which suggests that a figure is better cut off in the middle of the chest, thigh, or leg than at the chin, waist, knee, or toe. Lastly, it is this that forbids of an akimbo elbow to just touch a bounding line, thereby to form a "K," or will not allow a pronounced line of direction to bolt out of the picture exactly at a corner, and thus to suggest a series of radiating lines, foreign and antagonistic to the design.

ACCESSORIES AND DRAPERIES.

In no direction, probably, have photographers erred so much as in the use of accessories; and yet there is scarcely any pictorial subject that does not require the expression and character obtained by the introduction of some accessory.

Nothing has so bad an effect as a picture crowded with accessories that have no connection with the principal subject. Many good artists run to excess in this direction, and all rules of art and good taste have been so outraged by the great mass that have used accessories indiscriminately, without regard to fitness or effect, that the demand for pictures of this style has almost entirely ceased, and the bust picture, with but little more than the head and shoulders, has become most in vogue.

It is not to be understood, however, that accessories consist only in the objects that may be placed in the picture independent of the subject, such as chairs, tables, columns, etc.; but the drapery that may compose the costume is an important accessory requiring taste and skill in its arrangement.

It is universally allowed that Raffaelle excelled all other painters in a graceful arrangement of drapery and a natural disposition of the folds. By studying the principles of the ancients he learned to consider the figure as the principal part, and that drapery should be regarded as an accessory; that it is intended to cover, and not to conceal; that it is employed not from caprice, but from necessity; consequently the dress should not be so narrow as to constrain the members, nor so ample as to conceal them, but suitably adapted to the size and attitude of the figures represented.

The photographic artist has his drapery under his control quite as much as the painter, and there is nothing in connection with composition that requires more careful study and a closer observance of nature than the disposition of draperies. Even in the simple bust picture, where there is so little to display, its effect is wonderful in giving a proper balance to the lines and contributing to the unity of the whole. But how much more important is it in a full-length figure, where its flowing lines and graceful folds may be made to not only give support and symmetry to the subject, but breadth and force to the whole, by a proper distribution of light and shade.

Variety in the use of accessories is a necessity that stimulates study and invention.

CROOKE ON "POSING."

If good lighting necessitates considerable study and knowledge of effects, posing demands no less; indeed, the art of lighting a subject may be mastered with tolerable completeness, while posing may never be thoroughly acquired, because it is less of a mechanical accomplishment. It calls for a knowledge of harmony of lines and the effects of balancing of parts—what, in short, is described as composition, and which everyone does not naturally possess. An operator may fail in this, just as painters sometimes do, who, though good colorists, are defective as draughtsmen and in the ability to conceive a good picture. We sometimes feel that photography is too literal to be artistic. From a client's point of view, its tendency is to exaggerate the imperfections rather than the perfections of face and figure. Should you have a stout figure to photograph, the neck, as a rule, will appear short. To obviate this appearance in the portrait it is best to adopt a standing pose, with the camera a little below the level of the head. If a sitting position is chosen, undue height will be given to the shoulders, and the shortness of the neck will be emphasized. In treating the opposite extreme—a thin figure, with sloping shoulders (not so objectionable in the gentle as in the sterner sex)—I would recommend a sitting pose, and in the case of a gentleman, especially when the head is large, a little drapery, in the form of an overcoat, loosely thrown back. The head should be turned in the reverse direction from the angle at which the body is placed, which will help to give the appearance of substance and harmony to the figure, and altogether make the picture more pleasing. A little attention of this sort will improve defects in the sitter just as easily as the want of it may produce them where they ought not to exist.

BARNES ON "THE BACKGROUND."

To obtain harmony which shall run through all the component parts of a photographic picture or portrait is not one of the easiest matters under the sun, and if there is difficulty experienced with the subject there is necessarily still more in the choice and treatment of background, foreground, and accessories. In the early days of photography one dark background was usually the photographer's sole stock, whereas now there is hardly a studio which does not contain from six to a dozen varied shades of plain backgrounds and a small assortment of painted interiors and exteriors. The plain background being the one most commonly in use, we will first direct our attention thereto, and endeavor to throw out a few remarks which may be of advantage as to its use and abuse.

One of the first rules of art states that the background of a picture should never be darker than the darkest shadow in the hair of the subject; and this, being our primary rule, is perhaps the one that is most often transgressed, not only by the mere tyro in the art, but occasionally by the old and practised hand. Of course, there must be exceptions to this rule, as to all others; as, for example, when to have

a plain background would spoil the drapery, giving it, as we have before now seen, the appearance of being cut and pasted on again. It is in cases of this kind that the advantage of a graduated background is found, and, although it is perhaps less trouble to have one painted in graduation, it is often found that better results are obtained by placing at an angle the ordinary one of uniform tint, which may be either flat or alcove, though the latter is, in my idea, much to be preferred.

NEWS AND NOTES.

THE new Falk Studio at the Waldorf-Astoria Hotel, New York, described in our April issue, has recently been equipped with electric light apparatus for making portraits at night. The system consists of an umbrella frame, about four feet in diameter, with a white silk roof. Around the inside of the frame are arranged twenty-one lamps of 100 candle-power each, with a larger lamp of 150 candle-power at the centre. Five of the lamps suffice for focusing purposes, after which twelve lamps are used to get the lighting effect desired. When all is ready for the exposure the full force of light is switched on, and, by a special arrangement, doubled in power for the actual time of the exposure of the plate, giving a total of about 4500 candle-power. This permits of an exposure of two or three seconds, and gives a negative of remarkable softness and depth. We learn that the light has proved as efficient for small groups as for single portraits, and the work we have seen, showing the capabilities of the new light, proves that it meets every reasonable requirement in studio portraiture. The many brilliant entertainments and other evening affairs which are a prominent feature of life at the Waldorf-Astoria will doubtless furnish Mr. Falk with profitable work for the new system, which is, of course, peculiarly adapted for portraying the light colored and filmy draperies affected by our women folk for evening display.

The Ray Filter Competition announced by Messrs Burke & James, 111 Wabash avenue, Chicago, is well worth the attention of our readers. Some valuable prizes are offered, and the conditions governing the competition are few and simple. Full particulars can be had from Burke & James, addressed as above.

Mosaics, 1901, is rapidly being prepared for press. As the last *Mosaics* of this century (ready November 25th), we have arranged for several attractive features, which will make the book one which every photographer should possess. Announcement of these features will be made later.

Another Opinion.—It is my opinion that the plain, straightforward portraiture is the best as a matter of business. I have made portraits of men along the new lines which have proven very satisfactory, but the same method used in ladies' pictures have not been so.

I try to judge my customer according to the way he criticises my work on exhibition, and do his work accordingly; but when I make a picture for the convention it is then that I work along the new lines.

Yours fraternally,

F. W. VOORHEES,
Albuquerque, N. M.

WHEN bromide or platinotype prints have been worked up with crayon or stump, the work may be fixed with a varnish made of pale shellac 1 ounce; borax, ¼ ounce; carbonate of soda, 60 grains; water, 10 ounces. Boil this for two hours, cool and filter. It is blown onto the print in a fine spray by means of an atomizer.

THE agitation against the destruction of the "big trees" in California appears likely to result satisfactorily. A lumber firm was proposing to fell these trees and turn them into plank. To make over a natural growth of thousands of years to irretrievable destruction in this manner is one of those crimes which can scarcely be calculated on a money basis. Once gone, the trees can never be replaced, and if left the grove will stand for centuries.

WILLOWS.

By Gustav Heinke in "Photo. Rundschau."

THE TREATMENT OF THE FIGURE.

BY JOHN A. TENNANT.

It is altogether probable that we will see a revival of the figure portrait in professional photography during these next two years. The public is weary of the bust picture, which has been very much overdone, and the photographer who can show his ability to handle the figure in an attractive way has a strong card in his favor. By a figure portrait I mean one in which the pictorial possibilities of the figure and its draperies, with such accessories as are needful (and no more), are developed to give additional character and attractiveness to the picture. It is a specialty which photographers have largely neglected, as I pointed out in my paper on "Heads" some months ago. Let us see what may profitably be said about it.

If we sum up in a few words the principles which influence the photographer in making a portrait, we see that, as likeness is the chief end in portraiture, so the pose should assist in the characterization of the subject, the arrangement being suggested by the individuality of the sitter. Simplicity is the key to success in the pose, concentrating interest by the avoidance of complexity, and emphasizing what is desirable by subordination. Variety is essential to interest, but should be used with great discrimination. The most common fault in the pose "as it is done" is confusion of interest resulting from variety without unity. The figure must invariably be supported and convey the idea of stability.

Broadly speaking, there are two methods of composition employed in handling the figure. In the one the figure is made to conform to certain recognized forms of beauty or elegance; in the other the securing of interest is based on the use of a "decorative line." The first method may be studied in the works of masters in painting, old and of to-day, and is undoubtedly the easier method for the beginner. The second is more popular with modern painters who, as a class, have been largely influenced by the spirit of the Japanese school, in which a "decorative line" is the beginning and end of composition. This method certainly gives great freedom for individuality, but its employment presup-

PORTRAIT: BY A. W. JUDD, CHATTANOOGA.

poses a deeper understanding of design than the average man can acquire. The end of both systems is, of course identical —to decorate a space. When, therefore, the simpler method has been mastered, the portraitist may, with advantage to his

PORTRAIT: BY S. WILSON JUDD, CHATTANOOGA.

work, take up the "decorative line" and its possibilities, in the application of which he will find abundant use for whatever his earlier work has taught him. Those inter-

PORTRAIT: BY A. W. JUDD, CHATTANOOGA.

ested in this method may find its influence in the work of Demachy, Puyo, Appleton, Craig Annan, Von Schöller, Hannon, Miss Weil and others.

As to the various forms employed in the composition of the figure, I am not sure whether it is wise to say much about them. The reader who will treat his subject with the aim to get grace of line throughout the figure, bearing in mind the elementary principles which have been referred to, should be able to get a pleasing pose without working for any definite form. The principal forms are, however, the pyramid or triangle, which may be inverted, erect, modified in height or base width; the circle, ellipse, and an oval figure within a rectangle. Of these the pyramid is peculiarly adapted for the single figure, and has in consequence been overdone. The ellipse has advantages for large groups, while the oval within a rectangular space may be used for groups of two or three persons. It cannot be too strongly emphasized, however, that these forms should only be suggested when employed, and that their too close following in the *contour* of the pose gives stiffness and formality. How the figure lines may be made to flow gracefully in and out of the pyramidal form is seen in the frontispiece of this number and in the portrait by Mr. S. Wilson Judd, accompanying these notes. In using the ellipse for group formation also, the faces should not be arranged so that the eye can follow the form of the eclipse with perfect regularity. I may here state what is known to many: that convexity of outline will invariably give more grace to the figure or group than the concave line. This may be observed in many of the illustrations in these pages and in the portrait by Mrs. González given herewith. Attention should also be given to the proportion of space occupied by the figure within the confines of the picture and to the shape formed by the relation of the outline at various points to the bounding lines of the picture. Large areas of background are usually to be avoided unless isolation of the figure is intended or desirable. Figures which are too large for the space they occupy are unpleasant; if too small, the effect is stagey. An erect figure, with the head bent, should always have sufficient space above the head to permit it to be raised (in the mind) without striking the bounding line, otherwise the effect will be uncomfortable. In fact, all sitting, kneeling, or stooping figures look better if they have sufficient space to stand erect.

PORTRAIT.
By Mrs. C. H. González, Guaymas, Mexico.

With women the three-quarter or full-figure pose is generally less difficult than with men; but, considering the abundance of opportunity, we do not see that profusion of figure-portraits of women which one would naturally expect. And much more rarely, indeed, do we see a pose which has not some obvious and easily avoided defect. Women have more natural grace than men, and less awkwardness of carriage; their draperies, too, offer a more pleasing variety of lines than is possible with masculine dress. Moreover, it is much easier to give a woman something to do which will supply motive and inter-

est in a portrait, besides enabling one to secure grace of action or harmony in arrangement.

The most common fault in portraits of women is the too obvious pose. This is generally expressed in a nervous or conscious strain after attitude. The first element of success, therefore, must be flexibility, the relaxation natural to the figure when it is unconsciously easy. Where this nervousness is observed, a good plan is to occupy the subject with some phase of action natural to a woman, as, for instance, the arranging of flowers, the "picking up" of the skirt, the opening of a parasol, and the like. In this way, by seizing an opportune moment, one may secure animation and grace of line in the figure as well as naturalness of expression. The moment of arrested motion may also be used to secure an animated and characteristic pose, as when a woman turns to greet a friend entering her room, or inclines the figure to take up something from a table, to arrange a lock of hair at the side of the head, etc. In all these details wherein we have pleasure in daily life a portrait may be had which will possess an easier grace than any formal pose.

A capital book dealing with the figure, which the ambitious professional should read and re-read, is Hatton's *Figure Drawing and Composition.* This was written for painters and designers, but is the most thorough in its treatment of its subject of any work within my acquaintance.

THE BLUE PRINT.

BY GEORGE E. BROWN, F. I. C.

THE interesting note on page 245 of the June issue, in which the wr.ter shows how to obtain a blue toned print (from a platinotype indirectly) may leave the impression in the minds of some readers that a blue print—a ferro-prussiate print—is not permanent. The blue color produced on the platinum print is spoken of as "very fugitive," and in comparison with it the ferro-prussiate image is said to be only "*more* permanent." Now, as a matter of fact, a blue print is among the most permanent of photographic images. In the historical collection of photographic prints and apparatus at South Kensington Museum, London, are blue prints made fifty years ago which are marvellously fresh and bright. This is only what might be expected from what chemists know of the stable properties of Turnbull's and Prussian blues. In the strongest sunlight these pigments do bleach a little, but they regain their original depth of color in the dark. Among aqueous reagents the only ordinary ones which affect them are alkaline solutions. Tap water often contains appreciable quantities of carbonate of lime, and sometimes of sodium carbonate, which is the cause of the blue print becoming paler if left to soak for long in the wash water. But this is not impermanency. If the water be acidulated the phenomenon is not observed, and one might as well accuse gelatine negatives of fugacity because they are altered by immersion in, say, a solution of bleaching powder. As a matter of fact, the blue image may be depended upon to last as long as the paper on which it rests.

I wonder whether the green citrate of iron and ammonia is used in America for making the blue printing sensitizing solution. It gives a far more rapid paper, which is just as satisfactory in other ways. The formula is:

A.	Ferri Ammonium Citrate (green),	110 grains.
	Water,	1 ounce.
B.	Potass. Ferricyanide,	40 grains.
	Water,	1 ounce.

These two solutions mixed together make the sensitizing solution, which acts quite well if after keeping it be filtered immediately before use. It will be observed that the proportion of ferricyanide is much less than when using the red citrate, otherwise the solution gives foggy prints. Green citrate is obtainable from the German chemical houses or their agents. Two makers are Muerck, of Darmstadt, and Dr. Theodor Schuchardt, of Goerlitz. In America I suppose it can be obtained from Eimer & Amend, of New York.

OUR PICTURES.

STATE CAPITOL: MARYLAND.

J. E. Watson

THERE are some useful lessons in our illustrations this month. They interest us by their attractiveness and variety of subject and treatment. The frontispiece and other portraits, by Mr. A. W. Judd, of Chattanooga, are perhaps the best examples we have seen from this veteran's studio in many years. The single example by his son, Mr. S. Wilson Judd, shows how well the younger worker has profited by his father's experience and training. Mrs. C. H. de Gonzalez sends us a little picture which does her honor in more ways than one. This lady is the wife of a prominent citizen of the thriving town of Guaymas, Mexico, proud of her profession, and striving, amid many difficulties peculiar to her location, to put forth work creditable to her patrons and to herself. We have watched her progress with much pleasure. Mr. Benjamin's beautiful miniatures are inspiring; we hope that they will awaken the ambition of our younger workers, recalling them to the field of "good straightforward photography," which they have somewhat neglected of late in their worship of "old master effects" and other strange gods.

The view of the State Capitol of Maryland, at Annapolis, made by Mr. J. E. Watson (formerly of Detroit, now of New York), offers a profitable suggestion in the pictorial treatment of an everyday outdoor subject. In it we get not only the feature of chief interest well displayed, but also a glimpse of the character and life of the locality, which adds new interest to the view.

In "The Willows," by Herr Gustav Heinke, reproduced from our contemporary, the *Photographische Rundschau*, we have a happy example of pictorial effect won with a limited amount of somewhat commonplace material along the sparsely wooded creeks of a flat country.

THE MINIATURE PORTRAIT.

ILLUSTRATED BY MR. I. BENJAMIN, OF CINCINNATI.

THE growing popularity of the miniature portrait is one of the most hopeful signs in current professional photography. We would like to persuade photographers to make more miniatures, to "take them up" and make a specialty of them for high-class business. There is no form of portraiture more beautiful to the cultivated eye; no style which so well displays the possibilities of photography and the skill of the portraitist. It is the most difficult form of portraiture also, and he who masters it may rest assured that he has won no mean degree of proficiency in his profession. All of which reasons are urged upon those who desire to improve themselves and their conditions.

A miniature portrait is simply a very complete likeness gotten within a small space. Its beauty depends upon its completeness; the wealth and delicacy of detail which it offers; its clearness and *finesse* of definition; its modelling and arrangement of line and light and shade, revealing the best parts of the subject in the most attractive way. When we look at a miniature portrait, such as those here engraved, or those shown by MacDonald, Benjamin, Rosser, Hoyt, and others at the two last conventions we note two things in particular. First, that the average portrait is fearfully crude as an exhibit of the capabilities of photography; and, second, that the miniature portrait, properly made, is an altogether desirable specialty for the better class of the photograper's patrons. It appeals especially to women, and is peculiarly adapted for the display of the

daintiness, the grace, and softness of character which belong to womanhood and childhood.

The miniature portrait calls for skill in its making. It is the refinement of portraiture, and the average photographer who sets out to make a miniature will find himself going to school again. The picture comes within the capacity of the eye; we see it as a whole in a single glance. Its lines and masses, its beauties and defects are so obvious that unless the beauties outnumber the defects we are at once dissatisfied. Hence the photographer who makes a specialty of miniatures learns to weigh his work more carefully and to think as he works. It teaches him, first of all, that most valuable of lessons in picture making: how the bounding lines of the picture space influence what they inclose, and the relation of different parts of a picture, the influence of tones in harmony and opposition, etc. He learns also the value of *minutiæ* in the obtaining of expression: how the smallest change in the direction of the body, the eyes, the poise of the head, the

It lends itself to a rich variety of forms, circular, oval, rectangular, etc., and is equally effective in the very small sizes (for personal wear) and in the larger sizes for wall display. It opens up a field for the sale of frames, from which the photographer can derive a fairly large and legitimate profit; and it is a style which may confidently be expected to bring larger orders than the usual cabinet or panel. It may be made to fit almost any purse, from the modest glossy print selling at a dollar, to the more expensive carbon on ivory. We have seen miniature portraits, each possessing its own peculiar attractiveness, on albumen and similar glossy papers; in platinotype, black and sepia; and in carbon on various supports, as paper, opal, celluloid, ivory; on watch dials, and brooches, on watch-cases and chinaware.

dressing of the hair and the disposition of the bust alter and change the expression. The miniature tells the photographer in a way which, perhaps, he has not before known, how important are the eyes in a portrait, how much they have to do with the power of the picture to attract or repel our admiration.

We have said enough for our present purpose. Those who saw the pictures shown in the *Miniature Class* at Milwaukee will readily grasp the points mentioned. For the unfortunates who could not attend the convention Mr. Benjamin, whose exhibit secured the highest award in this class, permits us to reproduce four of the prize pictures. Do they not deserve all the praise we have given to the miniature portrait and indicate its desirability as a specialty?

HAND-WORK BEFORE PRINTING.

WITH the ethics of hand-work this article has no concern. Its object is simply to suggest and describe methods of local treatment by which the photographer can remove imperfections in his negative, or so alter its printing value in parts that the resulting positive is better technically, or appeals more strongly to his artistic sense. We differentiate the methods we propose to discuss from "retouching," because "retouching" is a craft in itself, and as such demands separate attention.

Besides negatives defective from flatness or hardness or other cause, we have all of us, doubtless, many on our shelves, good technically, but which would yield more pleasing prints if only something were a little different.

Here, for instance, is a portrait spoiled by glinting specks of light in the background; another in which the high-lights on the draperies conflict with those of the face; or, again, another which seems but io need some touches of brightness to raise tt from dismal dulness to pleasing contrast. Here is a landscape in which the play of light and shade that appealed to us on the screen has been lost entirely, or in part, by some error in exposure or development.

The methods we propose to describe are both chemical and physical, partaking of the nature of intensification as well as reduction. They agree in two particulars, in that they are local in application and demand no great amount of practice or skill.

Passing over the question of "spotting out" pinholes with the simple instruction to use the point only of a fine sable brush of good quality and as little color as possible, we come to that method of hand-work which is simplest in use, and perhaps of most general service.

WORKING ON THE BACK OF THE NEGATIVE.

This method consists in covering the glass side of the negative with some coating or material upon which we can work with pencil, crayon, stumping chalk, or water-color. By its employment three distinct varieties of negatives can be greatly improved in printing quality.

1. Weak negatives, yielding flat, uninteresting prints.
2. Harsh negatives, too thin in the shadows and too dense in the high-lights.
3. Negatives fairly correct in exposure and development, but from which more pictorial results can be obtained by keeping back certain portions during printing, so that the feeling of atmosphere and distance is emphasized or corrected.

Method. Carefully clean the glass side of the negative, and coat it with matt varnish or cover it with *papier mineral.* For small negatives or for printing on smooth-surfaced papers the varnish is to be preferred; for large work or for printing on rough papers the *papier mineral* is easier to use and cheaper.

Several excellent makes of matt varnish are to be obtained commercially, and one or other of these will probably suit the amateur better than any he may prepare himself. For those who like to make their own the following formula is given, and will be found satisfactory:

Matt Varnish.

Sandarac, ...	1 oz.	30 gms.
Mastic, ...	96 grs.	7-5 "
Methylated Ether, . .	10 ozs.	300 c.c.
Rectified Benzine (Petroleum Spirit), .	5 to 6 ozs.	150-180 c.c.

Dissolve the sandarac and mastic in the ether, filter if necessary, and then add the benzine. The less benzine used the finer

the grain. Keep in a well-stoppered bottle, and do not use the varnish near a naked flame. It is highly inflammable. Be careful to get ben*zine* or petroleum spirit, and not ben*zene*. If preferred, the benzine may be kept separately from the other ingredients, and more or less added to a portion of the ether solution immediately before use, according to whether a fine or a coarse grain is desired. If the negative is unduly thin a little yellow aniline color, such as is sold in packets for dyeing clothes, may be dissolved in the varnish before it is applied.

To coat the plate evenly with this varnish, without allowing any to run over the margins or down your sleeve, require a little care and practice. It is best done by holding the negative by the near corner, between the thumb and first finger of the left hand. Then, taking the bottle of varnish in the right hand, pour the liquid gently on to the centre of the plate until a circle of fluid covers about two-thirds of the surface. Gently incline the plate so that the varnish flows quietly to the right-hand far corner, then along the margin to the left-hand corner, down to that by which the negative is held, and finally along the near margin to the right-hand corner, from which the surplus is allowed to drain back into the bottle. A few trials on waste pieces of glass will enable an even coating of varnish to be applied to negatives of small size, but larger plates present more difficulty, and the *papier mineral* covering, afterward to be described, is much to be preferred. Having coated the negative, stand it to dry in a vertical position, with its right-hand bottom corner resting on a piece of blotting paper.

When dry the varnish should present an even matt surface, which will take the lightest impression of the pencil, crayon, or stumping chalk. For small work we prefer a B.B. pencil of good quality, or a conté crayon in wood; for large work and broad effects black stumping chalk may be used. These requisites are readily procurable from dealers in artists' materials at a small cost. The stumping chalk is sold in glass tubes. A little of it should be spread on a small piece of chamois leather, and sufficient taken up on a leather stump, or on the finger tip, from time to time, as required.

The negative, if small in size, or of an architectural subject, may advantageously be supported in an ordinary retouching desk. This is, however, by no means necessary, and we must confess to being content with the more homely expedient of supporting our plate against the window pane, while our pencils and stumps lay conveniently at hand on the ledge beneath.

In dealing with flat negatives we work the material we have decided to employ over those parts which should be lighter in the print. The silver image, as seen through the plate, guides our hand, so that little or no knowledge, or aptitude for drawing, is requisite. Indeed, putting in detail should not, as a rule, be attempted, and our efforts should be directed chiefly to securing an even coating of pencil or charcoal, which will serve to keep back the light and yet not obliterate the structure of the part. In short, it is local intensification at which we are aiming, as distinct from a modification of the texture of image as is common in "retouching" on the film.

With harsh negatives too thin in the shadows and too dense in the high-lights, our procedure is different. Here we work over the *thin* parts, so as to prevent their over-printing before the detail in the high-lights appears, and we may further harmonize the contrast by scraping away the varnish where the image is already too dense.

With negatives of the third class there is a greater scope for individuality and artistic feeling. By a careful study of the various phases of nature the photographer will grow to carry away in his memory recollections of the effects of light and shade, and will be able to coax them out of his negative, when the imperfections of his process, or some error on his part, have led to their not being represented in the developed image.

In using *papier mineral*, the paper must be properly applied, and to do this it is cut to the size of the negative, slightly damped with a sponge, and laid on a clean pad of blotting paper. A narrow rim of any adhesive is then applied to the edge of the negative on the glass side. The plate is now laid, glass side down, on the damp *papier mineral*. Turning the negative over we smooth down the adhering sheet of

paper and leave it to dry, when it will be found to be stretched tightly and evenly over the glass. On this backing of semi-transparent paper we work with pencil or stumping powder, as described in dealing with matt varnish. To secure transparency where the negative is dense, however, we may either cut away the paper, leaving a serrated edge to secure a soft margin, or we may render it locally transparent by applying any oil or grease. . . .

We may fittingly conclude with one word of warning. Be sparing with your charcoal. A few light touches will make a surprising difference, and overworking may easily lead to faults equally, if not more glaring than those in the original print.—*The Photogram.*

VELOX FOR THE PROFESSIONAL.

SOME time ago, in conversation with a photographer who has been remarkably successful in specialty work, the question of printing papers came to the front. "Why don't you urge professionals to use *velox* more?" was urged upon us. We replied that there seemed to be a general feeling that *velox* was hardly fine enough for the better class of portraiture. "Rubbish," was the reply. "If the intelligent photographer will once take the trouble to thoroughly test the possibilities of *velox* as an all-around paper, as well as for the very highest grade of his work, he will be surprised to see what a good thing he has missed in neglecting it."

This set us thinking. Later, during a visit to Nepera Park, where *velox* is made, we had an opportunity to see representative examples of what could be done with different varieties of *velox* with different sorts of negatives and for a variety of subjects. Among the prints we saw not a few equal to the finest platinotypes it has ever been our good fortune to see, and the range of effects obtainable by the proper selection of a variety of *velox* suited to the negative and subject were remarkable in extent and quality. The *quality* of a good *velox* print deserves emphasis. We have no hesitation in saying that a *velox* print properly made and finished, from the right sort of a negative, is as attractive a print as the professional could desire to send to his patrons, regardless of the price he obtains for his work. This fact is already recognized by many, but we think that the majority of photographers could profit with a larger use of *velox*. For this reason we have had prepared, by an expert worker, a concise account of the different varieties of *velox* obtainable and of their precise manipulation.

First, taking the different kinds of *velox*, we see how completely the paper can be adapted to any kind of negative or subject. All *velox* papers may be divided into two classes, known as "Special Velox" and "Regular Velox." These terms have reference to the time of exposure and development. REGULAR *velox* is designed for soft negatives and for those which need their contrast increased. It requires a much longer exposure than SPECIAL *velox*, but the image develops in one-half the time, or less. SPECIAL *velox* is adapted to soften hard or contrasty negatives and to give the most delicate gradations of tone of which the negative is capable. To secure the best possible prints from your negative be sure to select the variety of *velox* best adapted to it. It is a mistake to use the same paper for different classes of negatives. *Velox* will not give in all cases good prints from poor negatives, but properly chosen and intelligently handled, it will give all the good qualities that are to be found in any negative.

Different Kinds of Velox.

The varieties of REGULAR Velox are as follows:

Carbon Velox. This is especially adapted for negatives that have a lack of contrast, and in the majority of instances will make a better print from such negatives than can be obtained on any other paper. The surface is a smooth matt.

Rough Velox. This has the same characteristics as carbon in its printing qualities, but it has a rougher surface. It is especially adapted to large negatives and to those where broad effects are desired.

Glossy Velox. This is especially designed for use where fine details are desired. It produces prints which can be squeegeed or burnished to a very high polish.

All the REGULAR papers are adapted to

use where negatives are thin or lacking in contrast.

We will next consider the SPECIAL papers. These are distinguished broadly from the "Regulars" by the fact that they print in one-fourth or one-fifth the time required for the latter, and on the other hand, they require about twice the time to develop that is needed by the regular papers.

Special Carbon. This has the same surface as the regular carbon, but having the quicker printing qualities of all the SPECIAL papers, it is adapted to negatives which do not need to have their contrast increased.

Special Portrait. This paper, like the Special Carbon, is for negatives that have enough or too much contrast, and will yield soft results from hard negatives. Its surface is half matt, which adapts it particularly to portrait work, hence its name of Special Portrait.

Special Rough. This is a very artistic paper, but its surface will usually be found rather rough for very small negatives, or for those where the print must have extreme accuracy of lines and details. The shadows have a deep, velvety black, while the half-tones are very correct and pleasing. This paper is adapted to the same kind of negatives as the Special Portrait and Special Carbon, but it gives broader effects and less detail.

Special Glossy. The characteristics of this paper are the same as the regular glossy, excepting in the time required for printing and developing, which adapt it to a different kind of negatives, as already explained.

Special Rough, Double Weight. This has the same qualities as special rough, so far as its printing features are concerned, but in consequence of its extra weight, combined with its rough surface, it requires no mount, and should be printed under a cut-out, which will insure a white margin, relieving the print and giving the effect of a mounted photograph.

Velox Postal Cards. These are made from stock of the same weight as the Special Rough, have the same printing characteristics and require the same handling, but the surface is a smooth matt, like the carbon.

The "Special" papers give softer results than the "Regular" papers, and are intended for negatives which have plenty of contrast, or even too much. With negatives which are deficient in contrast do not use the Special papers. Instead of doing so, make your prints on the Regular papers, which will tend to give more contrast to the weaker negatives. A negative must be judged by its contrast, not by its being thick or thin.

The Choice of a Negative.

The negative designed for use with developing paper like *velox* should have rather less contrast than one designed for printing-out paper, because the tendency of *velox* is to emphasize the contrast of the negative, making the shadows darker and the high lights more brilliant. One reason for the lack of success, at first, in the use of *velox*, of which some photographers have complained, is that their negatives are at times undertimed and, therefore, excessively "contrasty," with defective detail, and when printing they overtime the prints, thus making a bad matter worse.

It is surprising to see what charming effects can be produced from rather poor negatives by a judicious selection of the proper *velox* paper, so as to adapt it to the quality of the negative, and then by a correct timing in the printing and developing. Of course such a modifying and remedying of the defects of poor negatives will require experience and some skill, but any one can acquire it who will work carefully along the lines here laid down.

Printing.

Although *velox* can be used with entire satisfaction in the daytime, in a darkened room, it is so much oftener used for evening work that in these directions we will proceed on the assumption that you wish to make your prints in the evening, either by electric light, gaslight or kerosene. General rules for the different kinds of light will be found a little further on. Having provided a suitable light, of any kind that is most convenient, we will consider the other portions of the *velox* printer's outfit.

To insure perfect results the place where you intend working should be far enough removed from the light source, to prevent the possibility of your paper becoming fogged. Eight or ten feet from an ordin-

ary lamp or gas jet is far enough, or if your space is limited you can work in the shade of a piece of cardboard or folded newspaper. The safety of your position can easily be determined by taking a small strip of the paper and, after covering a part of the strip, exposing the remainder for about thirty seconds where you intend working. If on development of this strip there is any difference in the exposed and unexposed portions, the light is too strong where you are working, and you should either move farther away or shade your light better.

For exposure artificial light is preferable to daylight because it varies less in strength, and after you have obtained the proper distance and time of exposure for a test print from a given negative, it is easier to make all the others uniform from the same negative. Place a box, or a support of some kind, in front of and at a suitable distance below the level of the light, in order to form a steady platform, or support, for the printing-frame, so that when you have ascertained the proper distance a mark can be made on the supporting box, and you can thus always be sure of repeating the same conditions as to light intensity. The essential point is to provide in some simple way for *uniformity of exposure to the light*, as the slightest variation in the position of the printing-frame in its relation to the light will make a difference in the time of exposure required for the best results. To ascertain if the light is evenly diffused at the point selected for exposure, take a piece of white cardboard the size of the printing-frame, and move it over the box or board until you find the location of the card where the illumination seems to be most evenly diffused, and let this be the printing point. A good general rule is to measure your negative from corner to corner diagonally, and make that the distance for the first test. It will in most cases be correct for printing.

The distance of the printing-frame from the light source and the exposures required under different conditions vary so much that an exact table of distances and time of exposure cannot be given, especially as the length of exposure varies with the strength of the light, the density of the negative and the brand of *velox* used, the "special" papers requiring but a fourth or fifth of the time needed for the "regular" papers. Average negatives require an exposure of from one to eight seconds to diffused daylight a few feet away from a northern window. With an electric arc light about the same exposure is required. A 4 by 5 normal negative at a distance of six to seven inches from a four-foot gas burner or a kerosene lamp will be printed in about twenty seconds on a "special" paper and in about seventy seconds on the "regular" paper. With a Welsbach burner about one-third the time allowed for an ordinary gas burner is needed. Weak or thin negatives require less time than dense or strong negatives. The safest plan is to make a test exposure as follows:

When opening your package of paper avoid exposing it to the bright light, as previously suggested. If uncertain which is the sensitized surface, notice which side of the paper shows a tendency to appear concave, and this will be the sensitive surface, as the paper curls slightly toward the coated side. When ready to make the first exposure cut a sheet of paper into small strips, say a half-inch wide, and placing one of the strips over an important part of the negative make an exposure, using your best judgment as to distance from the light and time of exposure. Develop it, and if not satisfactory try another strip, varying the time or distance as indicated by the first result. When the best results are secured that can be obtained with the negative you have you can proceed to make any desired number of prints from the same negative, and if time and distance are identical all the prints should be equally good. Then by comparing your other negatives with the one printed from you will be able to make a fairly accurate estimate for other exposures, and if care is used good results should follow in each instance.

The Best Developer.

Although good results may be secured on *velox* with many of the developers now obtainable, long experience and constant use, in experiments extending over several years, has shown that the well-known "M-Q" formula, which is given herewith, is the best and most convenient. It should be compounded as follows:

Formula for "Regular" Velox.

Water	10 oz
Metol	7 gr
Sodium Sulphite	½ oz
Hydroquinone	30 gr
Sodium Carbonate (desiccated)	200 gr

Or 400 grains of crystallized carbonate.

Bromide of Potassium, 10 per cent. solution, about 10 drops.

For "Special" Velox.

Use double the quantity of water.

These chemicals will dissolve in cold water, but much more quickly in water that is slightly warmed. If dissolved in warm water, the solution should be allowed to cool before using it.

All developers require the addition of a certain amount of bromide of potassium to keep the whites cleared, and it is most conveniently used in a 10 per cent. solution, which is made by dissolving one ounce of bromide in nine ounces of water. As the amount of bromide necessary varies with the age and condition of dryness of the paper and the purity of the water and chemicals used, it can only be given approximately. It is easily determined, however, by first adding the amount given in the above formula to the solution, and then making a trial test by laying a half inch strip of *velox* over an important portion of the negative, and printing and developing it in the regular way. If the whites appear fogged, add a few more drops of the bromide solution. If, on the contrary, the whites are clear and the blacks have a greenish tinge, there is too much bromide in the developer, and it will then be necessary to add a little of a stock solution of developer that contains no bromide. To avoid this latter necessity, in adding to the amount of bromide do so very slowly and drop by drop, making tests as directed.

The effect of these additions of bromide in minute proportions forms an interesting study, and permits of wide latitude in manipulation.

Note that when just enough bromide has been added to keep the whites clear, the blacks may have a bluish tinge. If then more bromide is added, little by little, and a test print made after each addition, the tone of the blacks will be seen to change gradually, from bluish-black to pure black, and, if still more bromide is added, to greenish or brownish black.

The method of development employed has also an important influence on the character of the prints. Thus we may develop by immersion, or the developer may be applied with a tuft of cotton or a brush. If working by the former method, the developer should be put into a tray somewhat larger than the size of the paper you are using. To the right of this place a bath of water in any convenient receptacle, and next to that the tray for the fixing bath. The prints should be immersed edgewise face up in the developer, and they should be evenly covered therewith at once to insure uniformity of development.

To develop by the cotton or brush method, instead of the developing tray, provide yourself with a piece of glass a little larger than the print to be developed, and pour the developer into a cup or tumbler. After the paper has been exposed place it face up on the glass, thoroughly saturate the cotton or brush, and pass it quickly over the surface of the print, applying the developer evenly and abundantly.

The image will appear gradually if the exposure is right, and if the paper is one of the "specials" it will be fully developed in about thirty seconds, while the "regulars" require only about half as much time. If the print flashes up *very quickly* and at once grows black it is a sign that you have *over-exposed in printing* or that you need more bromide in your developer. If *under-exposed*, your print will, on the contrary, develop *very slowly*, and it will finally be found weak in important parts.

Fixing and Washing.

When the print is fully developed it should be dipped in the bath of water for an instant to remove the surplus developer, and then fully immersed in an acid fixing bath, prepared as follows:

Hypo,	16 oz.
Water,	64 oz.

Dissolve and then add the following hardening solution:

Water,	5 oz.
Sodium Sulphite Crystals,	½ oz.
Commercial Acetic Acid,	3 oz.
Powdered Alum,	½ oz.

With the hardening solution this mixture will keep for any length of time in good condition, and it can therefore be made up in advance.

It can be used over again as long as it

retains its strength. *It is also an excellent fixing bath for dry plates.* One pint of this bath will fix seventy-five Velox cabinets, or 5 x 8 prints, if it is kept from becoming alkaline by the occasional addition of a little more acetic acid, say a half-ounce at a time after a few days' use of the solution, or after it shows signs of becoming alkaline.

In this fixing bath you should *keep your prints moving* for the first few seconds, so as to insure uniform and thorough fixing and to prevent stains from uneven action of the hypo on different parts of the print. If a small stick is used, or a glass rod, or a small glass funnel (using its stem as a handle), this will obviate the necessity of frequently washing the hands, to avoid mixing the hypo, which may remain on the fingers with the developer, in moving the print from one tray to the other. Allow the print to remain in the fixing bath from ten to fifteen minutes, then let it lie for an hour in a tray into which water is running slowly from a faucet, or else in water which is frequently changed during the hour; at least eight or ten times. Of course a number of prints can be in the fixing bath and in the wash water at the same time, care being used in the fixing bath that they do not follow each other too rapidly, and that each one is moved about for a few seconds before it is allowed to sink to the bottom and remain quiet. *Many prints are spoiled by neglect of this precaution.* If this is attended to it will not hurt the prints to remain for a longer time in the fixing bath, except in hot weather, when they may turn brown as the bath becomes warm. Imperfect washing will cause your prints to fade after a time, owing to the chemical action of the fixing solution remaining in the paper and drying if it is not thoroughly washed out in the final bath. *Use plenty of fixing bath.* Do not attempt to fix your prints in too small a solution. A pint is a small enough quantity, even if you intend to fix only a dozen prints.

Drying and Mounting.

Velox prints will dry of their own accord if you place them (face up) separately on cheese cloth or other absorbent material, taking care that they are not piled on each other while the sensitized side is still damp, as that might cause them to stick together. The prints when dry will curl a little, but can be made flat in the following manner: Take each print separately, and turn it face downward on a smooth surface which will not scratch the print. Then take a blunt edged ruler and draw it over the back of the print with a slight pressure, lifting the print as the ruler passes over it.

When the prints have been dried and trimmed and are ready to mount they should be made thoroughly wet and laid face down, one upon the other, on a piece of celluloid, glass or other smooth, clean surface. The surplus water should then be soaked up with a cloth or blotter, and a good starch paste applied to the topmost print. Then raise the print by taking hold of two diagonally opposite corners with the thumb and forefinger of each hand a little way in from the edge, and turn it over and place it in position on the card. Wipe any superfluous paste off with a wet sponge, and lay a blotter over the print, and with the hands rub it into good contact with the card. Then set it aside to dry.

To prevent cards curling after prints have been mounted, paste a piece of paper the same size as the print on the back of the card.

Causes of Failure and Remedies.

Grayish Whites. Lack of bromide in developer. Add a few more drops of a 10 per cent. bromide of potassium solution. May also be caused by trying to force the development of undertimed prints—possibly light-struck paper.

Greenish or Brownish Blacks. Too weak or too old developer; too much bromide in the developer; oxidized developer; over-exposure. Take a more concentrated developer or use less bromide. Strong and fresh developer can stand more bromide than a weak one without giving greenish blacks.

Contrasty Prints. Negative too harsh, make softer negatives. Use "special" velox, which works softer. Short exposure with "special" velox will still further decrease contrast.

Lack of Contrast. Negative is too weak. Use "regular" velox, which gives more contrast. If you use "special" velox you can increase contrast by giving longer exposure, and by diluting your developer and adding more bromide.

Prints too Weak. Under-exposure or developer too weak. Too weak a negative.

Prints too Black. Over-exposure. See also "Grayish whites."

Yellow or Purple Stain Sometimes Irregular in Shape. Developer not spread uniformly over the prints, or too long a time elapsed between developing and fixing. When fixing you should immerse completely in the acid hypo, and keep your prints moving during the first few seconds after immersion. Stain all over the film is the result of trying to force the development of undertimed prints, or too weak a developer, or incomplete fixing; or insufficient washing after fixing; or wash-water containing iron. In case of incomplete fixing or incomplete washing, the prints will have a sweet taste. Rinse prints before fixing.

Blisters. Prints have been creased or broken while washing. Do not allow water to run directly from the tap on to the prints. Too much acid or too strong hypo may cause this, and dilution of same may avoid it. Too great a difference in temperature between the baths or wash-water may give rise to them.

Discoloration around the Edges. If the centre of the print is clear it indicates that the paper has been kept in a place where it has been exposed to chemical emanations (ammonia vapors, illuminating gas, coal gas from furnace or stove, sewer-gas, etc.). May be caused also by not spreading the developer evenly and abundantly over the prints.

Round White Spots. Air-bubbles on the surface of the paper, which may be removed by means of the finger while the print is developing.

White deposit all over the surface of the print is due to milky hypo bath. If washed off thoroughly this does no harm. Can be removed by means of a damp sponge.

Picture developing irregularly "freaks," and appearing to be covered with irregular greasy streaks, as if the paper were not coated uniformly, or had been touched with greasy fingers: This defect occurs while developing, especially with glossy and "special" velox, and is the result of the use of impure sulphite which contains sulphate. Too dilute a developer may cause the same defect. Soaking the paper in water before developing will avoid it, in case concentrated developer or pure sulphite is not at hand.

The print is good, but surface is covered with marks usually running in one direction. This occurs mostly with glossy velox, and is the result of pressure or friction. These surface marks can usually be removed from the dry print by rubbing the same with a tuft of cotton dipped in wood alcohol. On matt velox surface stains can be erased by means of a soft rubber.

ABOUT KNOWLEDGE.

THAT "knowledge is power" is an axiom that cannot be gainsaid, and in no place is knowledge more potent than in business. Capital may do a great deal, but capital without knowledge is like a cart without a horse, or a train without a locomotive. Capital greases the wheels of business, but knowledge is the motive power which makes things move. When the two things can be combined we have the chief elements of a successful business, and it will be invariably found that successful businesses are those in which capital is wedded to knowledge. The man who has had to "make his pile" knows this well enough, but the man who has "come by" his money as an inheritance, or otherwise than by the fruits of his own industry, is too often taught a sad and bitter lesson when he imagines that money will carry him through anything and be the full equivalent of brains. There is a very ancient anecdote about two men who went into partnership, the one with plenty of money and no experience, the other with plenty of experience and no money. When the dissolution came the position of the partners was reversed, and the only asset the former was able to get out of the transaction was a good deal of experience. The late claimant "gave himself away" with a philosophical remark which, when revised from its grammatical eccentricities, read: "Some people are born with money and no brains, some with brains and no money; the former were intended by Providence for the latter." This rather aptly puts a case which is only too common in

business, and it is too sadly true that the man who embarks on the stormy sea of business with no better oar to propel and guide him than a long purse soon falls a prey to the wreckers, and is lured on to the jagged rocks of bankruptcy.

It is a fallacy to suppose that money can make up for lack of knowledge of a business, because you can afford to hire the knowledge at so much per hour, per day, or per week. You must have knowledge yourself before you can employ profitably the knowledge of others. The hugely successful businesses of to-day are nearly all run by men who have been "through the mill," and have had an intimate knowledge of the working of every department. The heads of some of the great businesses may not seem to exert much influence, and may have almost retired from the concern, but if we inquire into its past history we invariably find that the man who runs it took an active part until he perfected his organization to such an extent that he was able to draw himself away from its drudgery. Instead of doing the work himself he trained up young men, or got in specialists and was able to tell them what he wanted, thus gradually making a head for every department. The employer's duty thus became simply the control of so many heads of departments, and as the business grew larger even this could be lightened by placing "heads" over "heads," like the successive officers of a ship or an army.

Thus the demand is keen in all businesses for men with knowledge, that is to say, a knowledge above the common ruck of things. The constant cry of employers is for men with their "heads screwed on the right way." Everybody knows what that means, and everyone who has anything to do with running a business knows how difficult it is to get them. Nature does not seem liberal in the production of such men, or our social or educational system is at fault. Boys are turned out of school thoroughly unfitted for the battle of life, because they have not been taught to think and act quickly.

What is the remedy? We fear there is none. We must abide by the law of the "survival of the fittest," and trust to the incentive of ambition for advancement to produce more and more of the right sort of men. As foreign competition makes the demand keener for good men we may take it that the incentives will become greater, and the standard of intelligence will rise higher and higher. But it will be a slow process, and meanwhile foreign nations with their soberer, steadier, more industrious and more highly educated workmen will be forging ahead and ousting us from the commercial marts of the world.

Well, it will be our own fault if we lose ground in the commercial race of nations. No nation has had greater advantages and opportunities offered than ours, and no nation has so slowly grasped them. We can only lament the fact and give a word of advice to those who will take it. All who would succeed in life must learn the value of perception and observation, and the importance of observing and thinking for themselves, opposing strenuously blind belief in authorities of any kind. They must rely on their own labor and research, yet not be ashamed to ask concerning that which they do not know. Those who possess knowledge find it a pleasure to impart it to those who are really willing to learn. We must all utilize more the knowledge we possess. Men should think more, read more, and question more. But as regards reading we must remember that it is valueless unless we pause and reflect on what we read. Acquaintance without real knowledge is too common a characteristic of to-day. There are plenty of men whose knowledge is as versatile as a volume of *Tit-Bits*, but what is wanted in the serious battle of business life is the man whose knowledge is thorough on some one subject. There is no harm in knowing a bit of everything, but we must know one thing well, and that must be the business we depend on for our bread and butter.

To sum up, we would say: Learn your business in its entirety, understand thoroughly all its technicalities, master all the details, watch its operations, improve where you can, never resting content to do the same as others, always striving to do better.—*Penrose's Process Work.*

"How to Enjoy Pictures," by Mabel S. Emery, is not only an attractive picture book for the reception-room table, but also an invaluable help toward the cultivation of fine taste. Price $1.50 post free.

STUDIO BUILDING.

BY ROBERT SCHOUTEN.

THE question of studio construction is one which almost every photographer faces at one time or another, and one to which much careful planning must be given. The one point about which all seem agreed is that the lighting must be from the north. Northeast is more correct than north, for the object of this position is to avoid the direct sun rays, and these may in summer, and in the late afternoon, shine from the west into a due north light. If the light is turned to the east it gets the morning sun at an hour earlier than when sitters are expected. In summer the sun at noon stands high in the sky, and unless the studio is placed on the north side of a much taller building it will be necessary to give a very steep slope to the glazed side of the roof, or to protect it with a screen projecting upward from the ridge of the roof. "In the beginning" the studio was more or less like an orthodox house with one side and one-half of the roof glazed. The pitch of the roof was sometimes made very steep, and the side was sometimes made to slope inward, and at last it occurred to some one that if these two slopes were combined into one it would simplify matters.

Years ago an "ideal" studio was suggested which was to be lighted from the side only, but the idea never became popular. The photographer at times needs all the light he can get, as, for instance, when he attempts a large group late in the afternoon. If a side light pure and simple were used he would have much difficulty in obtaining even illumination—in fact, it would often be impossible. But the single slant had advantages over the single straight, and it was without the disadvantages of the old roof, and doubtless it has come to stay. With a single slant we at one swoop get rid of almost the whole difficulty of leaky roofs, and the strong and often clumsy construction at the angle where the roof and side meet is done away with. There is no such thing, too, as accumulating a load of snow. These little practical advantages are all worth considering.

A light which has sometimes been suggested is a top light. Once for all, grasp this question and understand it. If a man has no other possible light he may do successful work with a top light, as he might with a south or an east light. But he would do it *in spite of* his light, and not *because of* it. For the average man to deviate from his north light is to seek trouble.

The glass for the studio is worthy of consideration. Some go to the needless expense of patent plate. A common glass, provided it is colorless, is just as good. For the roof a fluted or "ribbed" glass will be much better for diffusing and softening the light than will clear glass. From ten to eighteen ribs to the inch is advisable.

The question of screens is much simplified by the introduction of spring-roller blinds, a great improvement on the old sagging screens, which were moved along wires by means of a rod.

What is the best size for a studio? Abraham Lincoln said that a man's legs should be long enough to reach to the ground; and if the studio is the right size for the photographer, that is the most essential point. We may in the future use longer focus lenses for studio work, and the studio should be long enough to give the requisite distance between camera and sitter, and room at the end for backgrounds and accessories. But do not have the studio large enough to allow its use as a lumber room. Much better keep the surplus accessories in another room.

The studio should not be overfurnished. Personally I would prefer a studio severely plain—a simple, straightforward workshop—but we are confronted by that "photographic expression" difficulty. To take a lady or a child into too bare a studio emphasizes the fact that having a picture taken is a solemn function. This idea we wish to avoid, and, therefore, a little cheerfulness and homelikeness are to be commended. H. P. Robinson thinks that much of the success of a picture depends on the sitter's impression of the studio, and he gives his ideas as to what studio furniture should and should not be. "The studio should have the effect of a moderately furnished living-room, such as sitters may be expected to occupy in their own

homes, avoiding shabbiness on the one hand and ostentatious show on the other. Don't let there be a great display of anything—not even of your own good taste. The effect should come on the visitor as a matter of course. You will not be able to hide the implements of your art, nor is it desirable that you should do so. But avoid that appearance of wreckage and lumber so often seen in studios. Your cameras, backgrounds, accessories must be there, but keep them in order.

"A cheerful effect has a great influence on many people. It is bad enough to be taken to a strange place and be made to go through a strange operation, without the additional discomfort of being taken into an uncomfortable room.

"As a general principle, violent contrasts should be avoided in the furnishing of the studio, everything being kept as quiet and as harmonious as possible. The wall-paper should be simple and quiet in pattern and of a warm gray in tone. The carpet is a difficulty. For appearance I should prefer to have it all over the room; but it offers resistance to the easy moving of backgrounds and furniture. It is better, therefore, to compromise the matter, and cover the floor with linoleum of a small, simple pattern, and have squares of carpet at both ends where the sitters are usually placed. It is easy now to obtain carpets of suitable pattern. There should be a fixed background at each end; others may be stretched on frames set up on casters, so that they may be rapidly changed without effect."

In furnishing a studio we may not always agree as to what is most appropriate; but to have a quiet and orderly appearance is always a safe rule.

THE AMATEUR.

BY F. BENNETT.

A FEW years ago we, many of us, had a belief that the amateur question was going to be a serious one for we unfortunates, to whom photography meant bread and butter. The amateur was going to invest five dollars in a camera, and in three months he was going to be "official photographer" to a wide circle of friends, at ten cents a time. In six months' time he would be in a cheap studio, working at ruinous prices. The story always ended in a prophecy of the early collapse of the intruder, but not until he had demoralized the legitimate trade.

Fortunately, in spite of what the pessimists say, things have not turned out as expected. The much dreaded amateur is here, and he is here to stay. The photographic ranks are to a certain extent recruited from him, but he comes in a legitimate way. He may be considered to some extent as an apprentice, and when he leaves his amateur work and swings his shingle he finds that all the pretty things which were said of his pictures do not stand the severe test of a fair price, and that he can only gain commendation and income by giving value for his money. The amateur of a lower grade, who was to continue working for nothing has not "panned out" quite as was feared.

But the amateur has broken out in a new spot; and the eruption is not big enough to be harmful, but quite big enough to be interesting. He is invading photography from *the top*.

With his half nebulous "art" theories and his jargon of pictorial value, he does not take kindly to the dollar-a-dozen idea, but figures largely on the individual value of his work. He hears wonderful reports that one man has sold a single picture for twenty-five dollars, and this story is immediately capped by one of a fifty-dollar sale. Somebody may have reached three figures, for aught I know; if not, I hope somebody will do so.

I dare say that these pictures have been worth the figure obtained. It is only very occasionally that anyone obtains a masterpiece. Given a really fine negative—technically—and full of pictorial quality, a man may obtain from it just the ideal print, and have a thing of beauty. If so it is worth a good price.

But this idea of the amateur is a good one. He may have some unbusinesslike idea, like a child who has not been burnt,

but in a few cases he has fairly got the better of us. We have been afraid lest a hand should emerge from the mud and grasp us by the ankle to drag us down. And while we have glanced fearfully downward the amateur has stepped in over our heads, with that old gag that we hear so much and heed so little—"there's plenty of room at the top."

The amateur at the top won't hurt us. If he is a man who has qualified himself by sheer hard work and ability he will strike out a new path, rather than compete with us. If he is overdeveloped on the art enthusiasm side he will be too overwhelmed with the personal attention to detail to do more than a limited amount of business, and will be more an object of respect and pity than of fear; for his work will not appeal to the purses of the many, and his enthusiasm will scarcely survive the hard experience of hard facts.

The man who is fully qualified, and who strikes out the new path, is setting a new pace for us. Perhaps I should not say for "us," for many of us are comfortably settled in our grooves with snug and pleasant businesses. But for the younger generation—that generation that so restlessly tries new ventures in the desire to make money—there is a good lesson in the amateur's invasion from the top.

I could mention some half dozen workers who have succeeded (I said that the movement was not a large one). If Dr. Wilson or some qualified writer would give us a short series of biographies of some of these workers we would have a most interesting and encouraging story. Let it be a brief constructive biography, telling the special causes which won success, in such a way that others may, if they have the ability, follow.

Don't despise the five-dollar camera man. He gets much innocent amusement from his hobby, and he is harmless. But do not forget the man at the top. He may have a lesson for us, and he is worth studying.

"THE PHOTO-MINIATURE."

BY EDWARD L. WILSON.

THE difference between the successful and unsuccessful photographer lies chiefly in the fact that the one knows, and the other does not know, his business. To the average photographer success is a matter of chance; to the successful photographer success is something deliberately worked for and won by steady progress along lines well thought out.

Knowledge is power. This is a trite saying, but a hard fact. Lack of success in business, lack of vitality or progress, lack of ideas, lack of the desirable faculty of being able to help one's self, to turn things to advantage, to make two dollars grow where but one grew before, all simply mean lack of knowledge. Wherever you find a successful photographer you will find also a man conspicuous for the fulness and breadth of his knowledge. First and foremost, he knows the ins and outs of his own business, and the breadth of his knowledge is seen in his ready information about "other things" outside of his business, but influencing him at every turn in the day's work.

To know everything about some one thing or specialty, and to know something about every other thing, is the secret of the successful man of affairs. The photographer should grasp the fact. Of course, mere information in itself does not bring success without action. But in the normal individual information is the inspiration to action—the power which moves the individual in his action for some desirable end. Because a man knows *this* he does *that*, and his progress is always forward. There is no stagnation, no getting into a rut if a man will but renew and add to his store of information. If we look at the work of Strauss, Falk, Benjamin, Hollinger, and other successful men in photography, we see abundant evidence of a wide knowledge of the possibilities of photography. Such men are themselves more interesting than their work, and their work is interesting and successful, because they put into it the charm of their individuality—the fruit of their knowledge. The more a photographer knows, and the more he applies his knowledge, so much the greater will be his success. And, in business, success means prosperity.

It was this belief which urged us when we entered photographic journalism nearly forty years ago, and which has sustained us during all these years. Photographic journalism is a hard field, and, so far, has proved unprofitable to the majority of those who have worked in it. But it has its pleasures and rewards, not the least of which is the thought that one's work is the helping of others to success, the putting into the hands of photographers the information which will help them to win success in life.

Since we began, in 1864, the means and ways of getting a practical knowledge of photography have multiplied wonderfully. In America alone we have more than thirty-eight photographic periodicals of more or less merit. In a recent catalogue we counted over two hundred books on photography, although the list purported to be a "selected catalogue" of the best books available of the hundreds in the market. Much of this literature has been brought into existence by the growth of amateur photography as a hobby, but it can by no means be lightly put aside by the professional photographer. In the published experiments of intelligent and active amateurs the wide-awake professional may gain valuable pointers, which, in a business way, may be used to his profit. The common-sense of this could be enlarged upon, but it is here intended merely to introduce *The Photo-Miniature* series of little books on photography, published as a monthly magazine.

The Photo-Miniature, as many of our readers already know, was projected and is edited by Mr. John A. Tennant, who was for many years our associate in the conduct of this MAGAZINE. It differs from other photographic journals in many ways, but chiefly in that each number is a complete little book in itself. Each number takes up a different branch of photographic work, and tells, in a plain and practical way, what the photographer should know about that one subject. The idea is admirable, and it is well carried out. Apart from the monograph in each issue, there are given a series of "Notes" covering the photographic news of the month in readable paragraphs, and from seven to fifteen carefully selected illustrations.

We want to draw the attention of photographers to *The Photo-Miniature* in a particular way, because, in our opinion, it is the most directly useful and valuable of our many contemporaries. It falls most completely into line with what is said in the earlier part of this notice, and is, in the best sense of its sub-title, "a magazine of photographic information." Thus far seventeen numbers have been published, giving seventeen monographs on as many different subjects, as follows: No. 1. *Modern Lenses;* No. 2. *The Pose in Portraiture;* No. 3. *Hand-Camera Work;* No. 4. *Photography Outdoors;* No. 5. *Stereoscopic Photography;* No. 6. *Orthochromatic Photography;* No. 7. *Platinotype Processes;* No. 8. *Photography at Home;* No. 9. *Lantern Slides;* No. 10. *The Blue Print and Its Variations;* No. 11. *Developers and Development;* No. 12. *Retouching Negatives and Prints;* No. 13. *Photographing Flowers and Trees;* No. 14. *Street Photography;* No. 15. *Intensification and Reduction;* No. 16. *Bromide Printing and Enlarging;* No. 17. *The Carbon Process.* Of these it may be fairly said that Nos. 1, 2, 4, 6, 7, 11, 12, 15, and 17 are indispensable to professional photographers, although the wise photographer will want the complete set. Strangely enough, considering the hundreds of books on photography, Nos. 2, 6, 13, 14, and 15 of *The Photo-Miniature* are the only books on these subjects. This gives them a peculiar value.

The practical advantages offered by *The Photo-Miniature* as a series are obvious to those acquainted with the form and character of the magazine. First among these is its compact form. The magazine goes easily into the coat pocket, and is flexible as well as convenient in the hand. As a bit of bookmaking it is peculiarly attractive to the eye and touch. The condensed form of its information is such that, although the monograph rarely runs over fifty pages, it contains as much reading matter as the average fifty-cent book if it were printed in larger type and more liberally spaced, as most magazines are. This compactness of form and matter will be appreciated by all who know how magazines pile up in bulk as the years pass along. *The Photo-Miniature* goes at once into our bookshelf for daily use, and so is always available when needed.

Then we must consider the fulness of its information and the way in which the in-

formation is placed before the reader. The fact that each number of *The Photo-Miniature* is complete, and aims to give all the information necessary on its subject, saves much laborious search when this or that is wanted. The sub-headings inserted in the text at the side of every page enable one to at once find the information required upon any subject or detail. Suppose, for example, that we need information concerning color screens and their use. Naturally we turn to *The Photo-Miniature* No. 6, dealing with *Orthochromatic Photography*. Glancing through its pages we see the sub-headings: "Color Screens or Ray Filters;" "Different Kinds of Screens;" "Aurantia;" "Naphtol Yellow;" "Brilliant Yellow;" "Acridine Yellow;" "Auramine;" "Mitchell's Screen," "Screens of Varying Tints and Depth;" "Liquid Screens;" "Colored Glass Screens;" "Shape and Position of the Screen;" "Focusing with the Screen;" "Exposure With and Without Screens," etc., covering sixteen pages, or six thousand words. This example, which might be applied to any of the seventeen numbers with equal satisfaction, shows how thoroughly the subjects are handled, and how encyclopædic the little books are in their information.

In our reading we have found other advantages in *The Photo-Miniature*. Its information is reliable, and the monographs are written by men who have had experience of what they write. It embodies American rather than English or European information; it is written down to the date of issue; and the information given is put into a plain and practical form without waste of words or space. More than this, there is a distinct individuality throughout each number, and we see that the writer is expressing himself rather than giving dry facts. The interesting way in which the subjects are introduced and handled is, in fact, one of the happiest features of the magazine.

Of the "Notes" and pictorial supplements we have said nothing, although they have given us much help and pleasure. What has been here written, at some length, concerning *The Photo-Miniature* is our sincere tribute to its practical value to the photographic world, the expression of the enjoyment we have had in its reading and in its progress as a work in which we are naturally interested. As a series of text-books, or as a library of reference for photographers, or as "a magazine of photographic information" we know of nothing in photographic journalism more interesting than *The Photo-Miniature*, and we have long desired to say so in as public a way as possible. We would like to see it in the hands of all our readers and of photographers everywhere, and we rejoice in the success which has attended the magazine since its first appearance.

The Photo-Miniature is published by Messrs Tennant & Ward, 289 Fourth avenue, New York, at $2.50 per year. Single copies of any number may be had for 25 cents.

THE ELIMINATION OF HYPO.

THE importance of thoroughly eliminating all traces of "hypo" or sodium thiosulphate from prints and negatives needs no argument with photographers who seek permanency for their work. Mr. T. Thorne Baker has a few notes on this subject in the last *Amateur Photographer*, which will doubtless prove useful to our readers. He says:

Since the permanence of the great majority of our prints depends mainly on freeing them from "hypo," a few remarks on some experiments we have recently carried out should prove of interest, especially to those who have at any time experienced a lack of washing water on a sailing yacht or in some similar position. The best method of washing both plates and paper is, of course, running water, and "plenty of it," but it sometimes happens that there is no running water and very little to be used for the "many changes."

Now, however little sodium thiosulphate there may be in a certain solution, that solution must necessarily be denser than water, and it will, therefore, sink to the bottom of a vessel containing water. Hence it follows that when a print containing hypo is left in a dish, film upward, to soak in water, the solution of hypo formed will simply rest on the surface and

remain there until the water is changed. If now the print be suspended in the water, film downward, the hypo solution will sink away from the inverted surface as fast as it forms, and the mere fact of its density being greater than that of water shows us that gravitation must also help in removing it.

A print was fixed for fifteen minutes in a 20 per cent. solution of sodium thiosulphate, at the end of which time it was removed and held under a gently running tap for about twenty seconds. It was then suspended film downward by resting on two wires fixed under the surface of the water; here it was left for three-quarters of an hour, and was then removed to another similar vessel containing 200 c.c. distilled water, like the former, where it was again left for the same time. On testing the first washing water by the well-known sulphide method (see note), sulphuretted hydrogen immediately evinced itself, showing the presence of a comparatively large quantity of hypo. Also the hydrometer showed its density to have been raised in an appreciable manner. The second washing water showed traces of hypo only after some time, and the hydrometer gave an apparent reading of 1 again. On testing the print itself, only the slightest trace of hypo was evident, and even this did not appear until after some considerable time.

The traces of hypo found on testing some carefully washed and finished photographs were about as evident as those obtained from the above-mentioned print. It may, therefore, be inferred that it is practically impossible to eliminate the final trace of hypo, and that the great bulk may be removed in the way described.

NOTE.—The smallest trace of hypo may be detected thus: Put a little of the suspected solution (or some water containing the suspected paper) into a beaker, with a scrap of granulated zinc; add a few drops of hydrochloric acid; place a filter paper moistened with lead acetate solution on the top of the beaker; if any hypo be present the filter paper will be turned first brown, then black with a metallic lustre; this is due to the discoloration by the sulphuretted hydrogen which is formed.

WORKROOM METHODS.

Fugitive Platinotypes. We recently received from a Western worker a batch of platinotype prints, sent to show that the prints were not permanent. The blacks are a rusty brown and the whites a dirty yellow.

Platinotype has always been regarded as possessing the merit of permanency more than most other processes, and if the reverse were proved it would be serious.

Fortunately for the good name of platinotype, these prints reveal error in the workman and not in the paper. We immersed them for a few minutes in the following bath: Carbonate of soda, ¾ ounce; chloride of lime, 1 ounce; water, 10 ounces. The prints were then removed and placed in a weak solution of hydrochloric acid for a few moments, and afterward well washed. From this treatment they came out without any remaining trace of either yellowness or rustiness.

In the case of a faded silver-print it is the image itself which alters and deteriorates. In the case of the platinum print the image is unaltered, and the change is due to the paper support.

As the paper alone changes we can restore the print by restoring the paper; but more satisfactory is to prevent any change by entirely getting rid of the causes which first act on the paper. This is a simple matter of sufficient cleansing after development. After development it is necessary to pass the prints into three acid baths, composed as follows, for a period of five minutes each: Hydrochloric acid, 1 ounce; water 60 ounces. Or citric acid may be used instead, as follows: Citric acid, 1 ounce; water 10 ounces. After this the print must be washed in plain water for about ten minutes, and then immersed in carbonate of soda, 1 ounce; water, 20 ounces, for five minutes, after which a final washing for ten minutes in water will complete the operation. This soda bath is intended to neutralize the acid in the paper.

To carefully work these details is more satisfactory than to be troubled with "fugitive" prints.

Focusing in Dark Places. It is sometimes quite difficult to obtain a sharp focus

when busy with the interiors of buildings or other subjects where deep shadows have to be focused. A common plan is to place a lighted candle in the shadow and to focus that, using a small magnifying glass. A better way is to use a specially prepared focusing screen. This screen is equally applicable for general work, and therefore there need be no changing of it. The chief expense, which is not great, is to obtain a piece of ground glass very much finer than the coarse glass usually supplied for focusing screens. Get a piece of glass cut to the required size, a few drops of Canada balsam and three microscopic slide cover-glasses. These latter are simply circular disks of very thin clear glass. Wash the ground glass with hot suds, dry it, and then rub the ground side with a little vaseline. Warm it before the fire and rub it again with a piece of clean flannel until the screen is as nearly transparent as it is possible to obtain it. With a soft black pencil make a mark such as a letter or a cross in the centre of the ground glass and another mark in an upper and a lower corner. On each of these marks place a drop of Canada balsam and then cover it with one of the cover glasses, pressing tightly into contact. The screen should be put away for a couple of days for the balsam to thoroughly set, and then if any has oozed from the glasses it can be cleared away with a little turpentine.

In focusing for very fine work where accuracy is required a magnifying glass is used, but this not only magnifies the object but also the grain of the ground-glass screen. This, of course, is a great objection in delicate places, but where a fine screen is used and prepared in this manner a practically clear image is obtained where the cover glasses are cemented to the glass. The use of the little pencil mark which was placed on the ground glass is to further insure absolute accuracy of focus. The magnifier is focused accurately on to the pencil mark, and it is then at the right focus for getting the image. When both the image and pencil mark are in focus at the same time the lens is in its correct position.

A screen prepared in this manner will be found much more satisfactory in working than the old screen assisted by a candle or any other subterfuge.

Common Sense About Patents. We are repeatedly receiving inquiries about patents. It is impossible for an editor to express any opinion on the possibility of obtaining a valid patent for any new thing or novelty which is described to him. There is nothing new under the sun, and it is very unusual that a thing is so entirely different or new that it cannot be contested if the contest were worth while.

There is a belief which is still too common, though not as common as formerly, that there is some mysterious virtue in a patent, and many men will waste time and money in the fond hope that a patent will lead to wealth. Many a good thing falls quite dead after being duly protected simply for lack of the necessary business capital to put it on the market. This question of the business end of pushing a thing is one that is too often overlooked by inventors, and if the inventor contrives to get a thing on the market and create interest in it, he may pretty safely assume that if it is really a success a very close imitation of it will spring up and trade on the demand which he has created. There used to be a custom of selling patent rights (or rather rights for working a patent in any special locality), and some royal battles have been fought to explode some of these so-called patents which were not such.

In the great majority of cases where our opinion is asked, the kindest advice (which is also the least acceptable) is to advise the man not to go further in the matter. It is simply throwing away more time and money. Of course, there are rare cases in which a man strikes oil and more cases in which a man manages to dispose of some patentable novelty for a nice little sum. But for the "amateur inventor" the prizes are very few compared with the blanks.

Mercury Intensification. Although in many hands superseded, Eder's method is still worked by some as being one of the simplest of methods, though with the introduction of ready-made solutions such as Agfa it is probable that it will be less in use in the future. There are occasional failures, and the failures are due to simple causes, and the cause is almost invariably insufficient washing at some period of the operations. Plates to be intensified should be washed at least an hour in running

water to get rid of the hypo. Perhaps an hour is longer than some would recommend, but it is wise to err on the right side. There may still be a slight trace of hypo left in the film, and to counteract this the intensifier should be made acid by the addition of hydrochloric acid. The strength of the solution should be adapted to the negative. For a very thin negative a saturated or almost saturated solution of mercury may be used, and for a negative where the intensifier required is only slight the solution should be considerably diluted.

Washing is an important point before the application of ammonia. If the plate is not sufficiently washed a white precipitate is caused in the film. If this happens it may be removed by a solution of sulphate of soda or bromide of mercury, but it may spoil the negative.

Lastly, if the negative has to be kept long a very complete washing is necessary after intensification is complete. Ammonia is not got rid of entirely by a mere rinse, and if the plate is not fully washed it may bleach in patches on drying or show stain marks.

Frames. Protests have before appeared in these pages on the matter of frames; but at risk of being wearisome a hint is here repeated that framing gives play for individual taste. Bad as have been some of the green and gold and the ochre-on-umber atrocities with which some salonic experimenters have worried us, they are at least infinitely better than the deadly-dull monotony of "nothing but gloom." Black and brown and dark green frames have been taken up in revolt against the plain oak and the gilt, but black and brown are not in all cases the best possible. Universal gloom may be slightly less bad than universal glitter, but that is about the best one can say of it.

The reason for all these dull-colored frames—if, indeed, there be a reason beyond the blind following of a trend of fashion—is worth seeking out. The frame and mount are supposed to be determined by the picture. If the picture is too cold in tone we may use a bluish mount to force some sense of warmth by contrast. If the picture is faint and delicate we may use a white mount and frame to strengthen the shadows, while if it is lacking in light a black frame may help to throw up what lights there are. If the frames be arrived at by this method, it seems that a large proportion of the exhibitors have got their prints down in the dumps to such an extent that they give funeral surroundings in the hope of forcing a semblance of cheerfulness by the contrast. If only from this point of view Alfred Stieglitz would have deserved his medal for his dainty vignettes with wide white margins. And if other pictures will not stand more cheerful frames, is it not worth while to consider the possibility of more cheerful pictures.—*Photograms of the Year 1899.*

Mounting Photographs on Calico. Large photographs, or more commonly large plans, often require mounting on calico, sometimes for the purpose of keeping flat and taut, more often to strengthen them in the rough handling they receive from builders and others. To mount on calico the calico should first be stretched on a light frame; 1½ by 1-inch pine should be strong enough for anything but the very largest sizes. A framework is made of this pine, care being taken that no screws or nails are put in from the side on which the calico is stretched, or they will afterward rust and mark the calico. Where the print has to remain on the stretcher the latter should be more carefully made than is needed where it is a mere temporary support. To mount the calico cut it an inch and a half each way larger than the stretcher. Double the edges under, and with a tack fasten the calico to the centre of the top edge of the frame, draw the calico tight and put a similar tack in the lower edge and one on each side. By carefully fastening the corners and then putting tacks at intermediate points the whole can be drawn taut without any creases at all. Coat the calico with hot size and allow to dry. Take a sheet of glass a little larger than the print and brush it lightly over with a gelatine mountant. Press the back of the print lightly on to this, and then quickly transfer it to the stretcher. The advantage of gelatine mountant is that it causes less expansion than does a starch paste, and so has less tendency to warp the stretcher. Rub the print slightly into contact and then turn the stretcher over, face downward, on a sheet of clean paper. The back may now

be rubbed vigorously to insure absolute contact, and if necessary pressure can be obtained at the extreme edges under the framework by inserting a knife there and running it along.

Bromide. A characteristic of bromide which has often been stated but does not seem to be quite generally known: It is that the first grain of bromide added to a developer has more effect than several grains added to a developer which already contains some. The whole question of bromide is in many ways a matter of opinion. With some developers it has much more effect than with others, but some claim greater sensitiveness to be a merit, while others claim the reverse. Many workers will never use bromide in their stock solution, and certainly it is not difficult to obtain a developer from which the bromide is lacking. If this is done it will be seen that the bromide in reserve gives greater power than when the bromide is first added to the developer.

Carelessness in the use of bromide has proved disastrous to many people with bromide or velox papers. The green tones on these latter, due to excess of bromide, are far from pleasing.

PHOTOGRAPHY ON TOUR.

Few people nowadays take their annual holiday without taking a hand-camera along, and as the usual procedure is to leave all the developing until the return home there is much scope for making mistakes and much need for method.

It is seldom that there is any very serious aim in our holiday work; the camera is a part of the holiday, not the chief end of it. And so we do not want to number and check and specify each exposure, preferring to wonder what on earth is coming now when we see the highlights slowly forming under the developer.

It has been remarked, perhaps with a certain germ of truth, that the best results are obtained by the absolute novice, who presses his button in blissful ignorance of any difficulties attending his practice. But unfortunately we can none of us be novices for more than one trip, and as we learn of difficulties so do we meet them.

There are many things to be considered in planning a tour. One thing is usually fixed for us, and that is the camera. Few of us are so fortunate as to be able to obtain a new one at will; we just take what we have got. There is little doubt that, theoretically the twin-lens hand camera is the best, but failing that a hand camera should be used. I am not here decrying the stand camera, but the tripod is, if not a heavy, at least a bulky addition to the kit, and comes perilously near making it a purely photographic trip. With the rapid plates of to-day and the great range in aperture—most hand cameras will work at $f/8$—it is the exception to find a subject which needs a time exposure. How long can a hand camera be held without moving? That is rather a disputed question, and depends doubtless on the photographer. With a bulb release I am fond of giving $\frac{1}{4}$ second and never have any motion; but I often heard $\frac{1}{16}$ spoken of as the longest safe period. To be confined to $\frac{1}{16}$ second is a very great limitation, and a little practice should in most cases much improve this. I expose by holding the camera in my right arm placed lightly against my side, and squeezing the bulb with my left hand. Of course, during exposure I stand as still as possible The question of plates has been much simplified lately, for the fastest plates are reliable. Choose a moderately rapid plate—a very rapid one if you wish—and use the same brand throughout the tour. Plates are packed much more safely now than was the case a few years ago. After exposure the plates should be packed face to face, without rubbing, and without paper between them, a dozen exposures being folded together in paper and replaced in their box. If films are used there is no question of packing. The question of exposure is vital, but not so difficult as sometimes thought. It is a good plan to start with a unit of exposure and reckon from that. Todd's exposure tables give very useful comparisons, and should be mastered before the journey is commenced. A glance at them and a little consideration will give a standard exposure for the day. It may be that $f/16$ with $\frac{1}{10}$ second exposure appears to be about correct at

noon, for landscapes. An almost unconscious consideration will suggest the correct stop and exposure for any condition that may arise.

If possible, know how long an exposure your "instantaneous" is. Many cheap cameras are very mysterious on this question, and it is not a good thing. It will usually be found in the outdoor sunny work which is so common, that work from 11 to 3 is unsatisfactory. As a mere matter of inconvenience the heat is oppressive, and the short, sharp shadows are not conducive to good results.

Sunshine is the natural condition of things on a summer holiday, and not a little experience is required to make the best of it. There is one common fault in sunlight pictures and that is—strange to say—underexposure. We are so apt in a blazing light to forget those shadows, and so we get those black masses in our prints. The exposure in bright sunlight should be as long as in a good diffused light.

On those days which we call fair—for they are neither bright nor dull—the best rule for exposure is don't expose. Such subjects as street scenes put on a terrible flatness on dull days. For them, as for tree-work, a *bright* diffused light, is probably best.

All plates should be backed. Halation is much commoner in outdoor work than is supposed. The light shining through the leaves of the tree gives a dead flatness that is very unpleasing; and such matters as a white hat or a white waist would look much more natural were they not intensified by a mild halation.

The rule should be slight overexposure. In developing use whatever you choose; and have at hand some developer without any bromide, and some with a double portion. Start with a normal developer, and use either of the others as required.

DEVELOPMENT NOTES.

Daylight Development.—This is a question, more interesting than urgent, which will not down. Occasionally some enterprising manufacturer will boom some novelty calculated to do away with the dark-room, and yet the novelty does not become popular. There is no doubt that a feasible way of developing in an ordinary sitting room, lighted with gas, would be a great boon to many occasional photographers, and the man who shows them how will be as great a benefactor as the man who gave them Velox. There are two ways in which this has been attempted. First by inclosing the plate in a dish made and entirely covered with non-actinic material—really a little hand-specimen of a dark-room; and secondly, by using a developer stained to a non-actinic color. This latter method was recently demonstrated by Mr. Howard Farmer before the Royal Photographic Society of London, and his method was on practical lines. He explained that the familiar ruby light of the dark-room was there for two purposes, viz , to enable development to be carried on, and to permit of the sensitive plate being transferred to or from the dark slide or to the fixing bath. He had made many experiments with a view to finding some fluid which, when added to the developer, would not interfere with its developing functions, but at the same time would keep out actinic light so that development could be conducted in gaslight or daylight. Mr. Farmer found two substances, convenient, easily worked and within the reach of the average photographer. The first of these is caramel, and the lecturer recommended that it should be prepared in the following way: To four ounces of cane sugar (powdered) is added one ounce of water. This mixture is slowly heated to a temperature of about 380° F. (but on no account must the temperature go beyond 400° F.) It is then constantly stirred for about half an hour, when it will probably thicken somewhat. It is now poured into a vessel containing cold water, when it solidifies to a solid mass. This mass is then digested in boiling water, in which it dissolves, forming a deep ruby-colored fluid. The above-named quantity is sufficient for coloring five hundred ounces of developer. The mixed developer should not be less than a quarter inch deep, *i. e.*, from the film surface to surface of the fluid. Here Mr. Farmer practically demonstrated his point; and had to use a dark desk, fitted with "armholes" through which his hands

were placed to transfer the plate, by feel only, to the developer. The tray with the plate was then brought out into the full glare of several electric lights. The layer of fluid above the plate just enabled one to see the image being built up. After the lapse of a few moments, development being supposed to be sufficient, the plate was quickly removed from the developer and passed into an acid fixing bath, when it fixed out a satisfactory negative without any fog. The caramel method seems applicable to or with any of the ordinary developing agents. That used in the demonstration was rodinal. The second method depends on the use of uranium nitrate in combination with a pyro-soda developer. A 10 per cent. solution of uranium nitrate is prepared. Of this 120 minims are added to four ounces of pyro-soda mixed developer, and the same procedure repeated. In this case also a deep red solution results, which seems to protect the ordinary plate from actinic light. Mr. Farmer mentioned that for some little time past he had been practising development in this way, and using a sixteen candle-power electric light only six feet away. In his discussion, after suggesting that plate makers might assist in this work he went fully into the results of many experiments, the point of chief importance being, perhaps, that no one coloring substance seems to afford complete protection, unless it were, like Indian ink, for example, practically opaque to all rays. The best results were obtained by a mixture of two coloring matters. The idea that the color of ferrous-oxalate developer was in itself a sufficient protection was, he said, altogether erroneous. Speaking of a very common custom, he said that there was no necessity to examine a plate during development; this was only an amateur's hobby or fad. The best thing to do was to develop fully, and then reduce if necessary. Oxidizing agents certainly did affect the image, but if sulphite was present in proper proportion. this was not the case. No one coloring matter seemed likely to give complete protection. Hence the safer plan was that of using two substances. So far as he had experimented, both caramel and uranium could be used with all the ordinary developing agents.

A Developer that does not Stain.—I am not going to describe any new developer, merely to quote a modification of the old standard which does away with the trouble of staining. In the early days of the dry plate some of us produced negatives which would not give a print on albumen paper with an hour's exposure to direct sunlight. The trouble was pyro stain, bad enough on fingers, but worse on negatives. It was this stain that made so many switch onto the new developers, and though they have all got some good points, none of them has so many as pyro. Pyro, without its stain, is the best all-round developer, and as the best rule is to stick to one developer—except for experimental work—why not let that be pyro. By always using the same developer we get to know it, and can always tell just what will happen. We can classify our negatives at a glance, and tell exactly what exposure will be required for carbon, or bromide, or velox.

Here is the developer—a reliable pyro-soda that will not stain either plates or fingers.

STOCK SOLUTION—PYRO.

Pyro,	1 ounce.
Soda Sulphite,	4 ounces.
Citric Acid,	40 grains.
Water,	20 ounces.

A.

Stock Solution—Pyro,	1 ounce.
Water to make,	4 ounces.

B.

Sulphite Soda (crystals),	1 ounce.
Carbonate Soda,	1 ounce.
Water,	10 ounces.

For use mix equal parts of A and B; in summer-time add 1 part of water to the mixture.

HINTS FOR HAND-CAMERA WORKERS.

A FEW hints may not be out of place for those who are, perhaps, taking up the use of the hand-camera as a change from skylight work. Hand-camera photography is delightfully easy but woefully deceptive, unless a few very simple precautions are well understood beforehand. The cheap hand-camera has usually but one instantaneous speed, anywhere probably from $\frac{1}{15}$ to $\frac{1}{40}$ of a second, and working with this

there is as much need for a little consideration of limitations as though the work were of a specialist order with a shutter working at $\frac{1}{500}$ of a second.

For this class of work is needed—what is not always needed for time exposures—a very rapid plate; also the largest lens aperture possible; a brilliant light; and lastly, a full remembrance of the fact that snap-shot work must not be near work. This last is where beginners usually err; but there are two important considerations. First an object in the foreground requires a much longer exposure than an object at some little distance; this rule is applicable to all photography, and is not in any way confined to quick work. Second, a near object will show motion more clearly and quickly than a more distant one, on account of its much greater size.

The direction in which the object is travelling makes all the difference. An object travelling at right angles to the camera—broadside on—will blur with one third exposure, which is permissible if the object is directly approaching (and not too near). There are many tables calculated to show the speed at which objects move, from a man who covers one and one-half yards in a second when walking "easily," to a locomotive covering fifteen yards a second as it dashes along thirty miles an hour. Take the case of this locomotive. In $\frac{1}{100}$ of a second it will have moved five inches, and so the box-camera, with its fixed speed of perhaps $\frac{1}{25}$ second would court disaster if it attempted a side-on view. But take the train as it approaches. Choose a spot where it rounds a curve, and at some little distance, and a sharp photograph will be got. If a column of dark smoke is puffed out, and the wind is right, the result may be a picture.

A little careful thought is of more use than all the tables. In most moving objects different parts move with unequal velocities. Take the golf-player as he drives his ball. His feet are firm on the ground, and do not move; his body merely gives a twist, but the club comes sweeping down with a swift swish, which, photographed with the swiftest speed of a cheap camera, will appear more like a dim fan radiating from the wrists of the player than like a metal-tipped rod of wood. But, if properly handled, the cheapest of cameras would get this picture at its best. There is a fraction of a second, when the club is raised to its highest, when striker and club are alike motionless. Again, after the blow is delivered and the ball is watched as it speeds through the air. And these easiest moments are also the best moments, for the eye is most familiar with the pausing phases of action, and the man with his club raised, or watching the result of the stroke, will make the most popular picture. This suggests the necessity of quick action. The "instantaneous" worker must touch the button at the precise moment, or all his work will be in vain. *Fore*thought will settle how to take a picture under any circumstances, so that when the moment arrives the opportunity will not be lost through unreadiness.

When a subject is impossible, don't waste a plate on it.

Remember the limitations of your method, and by respecting and considering them you will get what you are after—results. Photography offers few pleasures to the careless worker.

THE ALUM BATH.

BY F. E. NORRIS.

HOWEVER careful we may be as regards our other formulæ we have all got an idea that the hypo fixing bath is a mere matter of "rule of thumb." There is a good deal to be said for this theory, for if only we leave our negatives sufficiently long in the hypo, and wash them sufficiently afterward we get our images fixed. But we carry this comfortable theory too far when we use alum in our fixing bath, or in addition to it, and we get wondrous markings which are sometimes very pretty, but which are exceedingly inconvenient. When these stains get into the film they are there to stay, and if there were no means of preventing them the alum bath would deserve all the hard things that are said about it.

Why do we use alum at all? It eases our troubles by hardening the film in hot

weather, and it helps the keeping properties of the negative. Some films frill, especially when they are being vigorously washed—for it is seldom that a plate frills during development unless development is very much forced. Alum prevents this frilling, and on this score alone is a necessity with some plates. Alum makes the negative dry after the final washing much more quickly and much more evenly; it makes the film better for taking a retouching pencil, and it renders it less liable to take up moisture. It is this tendency to absorb moisture from the atmosphere which is responsible for silver-stains on negatives. It is sometimes suggested that the stains are due to the plate being placed in the hypo direct from the alum bath, without intermediate washing. But there are some combined alum and hypo baths, so it cannot be the mere mixing of the two substances. The real trouble lies in that old question of acidity. Our developers—except amidol and ferrous oxalate—are alkaline. If we do not thoroughly wash them after development we take just a trace of this alkalinity over to our alum bath. This accumulates, and just as we are beginning to think that the trouble is over we come across a lovely stain.

It is possible to use the alum bath *after* fixing instead of before. But this does not entirely get rid of the difficulty, only makes it less frequent. The plate must be lifted direct from the developer to the hypo, and direct from the hypo to the alum, for if we have to wash before using the alum we run the risk of what we are trying to avoid, that is the frilling or blistering of the plate in the washing water. It has been suggested that an alum bath should be used which has been acidified by adding citric acid. But such a bath must be used after fixing, and every trace of the hypo must be first washed away. This is of course, what we wish to avoid, for this washing may carry our film off the plate. The question then hinges on the acid fixing bath, and in this we have the solution of the difficulty. There have been many acid fixing baths recommended, and one of them is a good one. Add potassium metabisulphite to the hypo in the proportion of one to sixteen. One ounce of metabisulphite to sixteen ounces of hypo. This bath, made up with the usual proportion of water, will work clean and unstained for a long time. Use the fixing bath immediately after development. I usually give the plate a rinse, under the tap for a few seconds, but not if the film is very soft; after it is fixed give another (optional) rinse under the tap, and then straight into the plain alum bath. After five minutes in the alum the plate is ready for any quantity of final washing.

By using this *acid* fixing bath before the alum, all liability to stains is avoided, and as intermediate washing is optional there should be no fear of frilling. Where the film will stand it—and it usually will—the few seconds rinse under the tap should be given between each stage. This simply keeps the hypo and alum bath clearer, and so makes them last longer.

JEX BARDWELL'S LANTERN SHOW.

BY JAMES F. RYDER.

I HAVE been seeing lantern exhibitions for many years, and I have been much pleased with the realism of the best. The exhibition of a few slides by the veteran Jex Bardwell, of Detroit, at the convention of the Ohio-Michigan Association at Put-in-Bay has put all former exhibitions quite out of sight. I seem never to have seen anything before worth remembering. How he produces the wonderful effects is quite beyond me to understand. The screen is not as large as is usually employed, but it glows with pictures startlingly rich in color and forceful naturalness. He showed a steamer at sea, with heavy cloud effect above and surrounding it. After a while the clouds change form and density; they dissipate and disappear.

Hello! here is a smaller vessel astern. No one saw it come. By and by it is gone. No one saw it go; but go it did.

It was not by the old dissolving method that this was done; it is as far removed as a fortieth cousin.

Now come grand views of mountain and glacier, so realistic you hold your breath

in wonder. You cannot take your eyes from the view; yet while you are looking it is changed; not quickly, but so gradually that you wonder when and how it was done. What was a few minutes ago the rugged mountain side is now a rushing stream, foaming and dashing, and now there is a great arched bridge of solid masonry spanning the stream.

We watch for "what next?" Without a signal or intimation of change we look intently, bound to see when, how, and where the old wizard is going to "do us," and without knowing "where we are at" it is done. The great river which was dashing down the mountain side is gone. The bridge and all the surroundings are there, looking as natural as though nothing had happened.

During the exhibition, to an audience of photographers more or less conversant with lantern exhibitions, and not easily taken by surprise, the applause was most enthusiastic. No person could see the superb work of Jex Bardwell and his lantern unmoved. Surely he has devised or discovered methods hitherto unemployed. He has made lantern work a new art, giving it an interest never before attending it.

EDITOR'S TABLE

PYROL.—This is a new form of pyrogallol, manufactured by HAUFF & Co., of Fuerbach, and introduced in this country by G. GENNERT, 24 East 13th St., New York. It is simply a fine grade of the familiar pyro, identical in its chemical nature with "pyrogallic acid C. P. resublimed," but concentrated and in the form of fine crystals. It has the practical advantages of great compactness, is more easily handled than the bulky pyro, is instantly soluble in cold water, and has a slightly greater activity than the older form. *Pyrol* has been enthusiastically received in Europe, and will, we believe, eventually replace the earlier form of pyro among American workers. In its use there is no necessity to change one's favorite "pyro" formula, but the following formulæ are given as suited to the plates mentioned:

For Seed Plates:

No. 1.—	Distilled or good well water	16 ozs.
	Sulphite Soda (Gennert's neutral)	4 ozs.
	Pyrol	1 oz.
	Sulphuric Acid	10 drops.
No. 2.—	Water	16 ozs.
	Sal Soda (crystals)	4 ozs.

To develop, take:

No. 1	1 oz.
No. 2	1 oz.
Water	8 ozs.

For Stanley Plates:

No. 1.—	Water	80 ozs.
	Sulphite Soda, crystals (Gennert's neutral)	6 ozs. Troy.
	Carbonate Soda, crystals	6 ozs. Troy.
No. 2.—	Water	80 ozs.
	Sulphuric Acid	½ drm.
	Pyrol	1 oz. Troy.

To develop take equal parts of Nos. 1 and 2.

For Cramer Plates:

No. 1.—	Water	6 ozs.
	Sulphite Soda (Gennert's neutral)	1 drm.
	Add acetic acid to turn litmus paper red, and then add	
	Pyrol	1 oz.
No. 2.—	Water	60 ozs.
	Carbonate of Soda, crystals	5 ozs.
	Sulphite Soda (Gennert's neutral)	10 ozs.

To develop, take:

No. 1	1 drm.
No. 2	1 oz.
Water	3 to 4 ozs.

A Hand-Book of Photography in Colors. By THOMAS BOLAS, ALEXANDER TALLENT, and EDGAR SENIOR. 230 pp., 6 x 9, printed on woodcut paper, with 100 half-tones and many diagrams. Price, $2; postage, 12 cents. Published by E. & H. T. ANTHONY & Co., New York, and MARION & Co., London.

We are glad to announce the publication of this important guide to photography in colors. Probably no other subject has excited so much attention during the past ten years or awakened so much curiosity as the possibility of obtaining photographs in color. In this interesting volume the whole subject is clearly and completely discussed by writers whose authority is unquestionable. The various

processes are described in plain language, with formulæ and the instructions necessary for their successful working, and the theories on which the methods are based are clearly given from the first to the last step.

It is a book which professional and amateur photographers should want to read and have its information at their fingers' end, and we congratulate Messrs. ANTHONY & Co. for their enterprise in securing the American sale of a work which is sure to become popular. The book has been well received in Europe, and we commend it to all seeking information upon its fascinating subject.

SCHOOL OF PHOTOGRAPHY.—Mr. ROCKWOOD, the well-known photographer, is in receipt of so many requests for instruction in his art that he has determined after the Christmas holidays to give a series of lectures in New York on the practical side of photography. His direct clear style of writing and speaking will enable his pupils to get a thorough knowledge of the art. He will take up posing, lighting, and the practical business side of photography for professionals and advanced amateurs. Mr. ROCKWOOD is, we believe, the first business expert to do this.

HONORS FOR AMERICAN PHOTOGRAPHERS.—The Imperial Royal School of Graphic Arts, of Vienna, has requested Mr. W. N. BRENNER, of Cincinnati, to donate specimens of his work to it for permanent exhibition. This is an honor which comes to Mr. BRENNER in an unexpected and most gratifying manner. He is one of the few American photographers whose work was accepted for the Paris Exposition, and fourteen studies were sent. In order to receive consideration the studies were passed on by a group of American artists, and again reviewed by the Paris judges, so that the acceptance was in itself a great honor. Mr. BRENNER will comply with the request of the Vienna School, and will allow the director to choose his own pictures. The studies are all of Cincinnati people, and several of them were reproduced in the *Commercial Tribune* when they were accepted.

Mr. FRANK G. SCHUMACHER, of Los Angeles, and Baker's Art Gallery, of Columbus, Ohio, were honored in a similar way, and their exhibits at the Paris Exhibition will eventually form a part of the permanent exhibition at Dr. EDER'S famous school.

THE BAUSCH & LOMB OPTICAL CO., Rochester, N. Y., are again adding to their lens-making plant. The present building has a floor area of 138,000 square feet. The new wing is 98 feet long and 22 feet deep, the whole having a floor area of nearly 40,000 square feet. The ROEBLING CONSTRUCTION CO., builders of the Brooklyn Bridge, have the work in hand, their fire-proof construction being employed throughout. As the larger wing will be used for the grinding and polishing of photographic lenses, it is constructed with the utmost solidity, the piers of which the walls are composed being three feet thick at their bases. Huge windows occupy the spaces between the piers, admitting an abundance of light. The floors are especially designed to prevent vibration, being tested to 4000 pounds per square foot, or a total weight for the building of 160,000,000 pounds. About half of the smaller wing will be occupied by vaults for the storage of valuable material, such as optical glass.

KLAY'S MULTIPLYING PLATE HOLDER has perhaps suffered somewhat from the fact that its possibilities have never been properly displayed in the hands of a capable photographer. The new edition of the *Klay Holder Catalogue*, just received, is beautifully illustrated by photographs made by Mr. GEORGE G. ROCKWOOD, of New York, and should be seen by all interested in this attractive money-making specialty. Copies can be had by applying to Mr. PETER DILLER, Bluffton, Ohio.

THE GRAND PRIZE.—The exhibit of the EASTMAN KODAK CO. has been awarded the *Grand Prix* at the Paris Exhibition. A cablegram giving the details regarding prizes in the American Photographic section was received at the EASTMAN KODAK CO.'S offices a few days ago, the same message conveying congratulations to the company upon receiving the highest honors in the gift of the Paris Exhibition authorities.

The receiving of the *Grand Prix* is no empty honor, for it places the company above competition at all future Parisian exhibitions. At the Chicago Fair all creditable exhibits received the "highest award," probably 90 per cent. of the exhibitors having it conferred upon them. At Paris, however, matters were arranged differently. The highest and most sought for award was the *Grand Prix;* then came the gold medal, silver medal, bronze medal, "honorable mention," and nothing, in the order named.

No other American manufacturer of photographic apparatus or materials was awarded the *Grand Prix*, nor did any English manufacturer receive a like award. The Kodak people have every reason, therefore, to be gratified at their success in eclipsing all competitors for exhibition honors.

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OCTOBER, 1900.

WILSON'S PHOTOGRAPHIC MAGAZINE

DEVOTED TO PHOTOGRAPHY, MONTHLY: ILLUSTRATED.

TO THE SECRETARIES OF THE STATE ASSOCIATIONS 433
LIGHTING AND THE HANDS IN PORTRAITURE. By Francis Paulus . . . 434
THE VIGNETTE. By G. E. Loring 436
BETWEEN THE STUDIO AND THE PRINTING-ROOM. By Jas. Rufert . . 437
BUSINESS METHODS APPLIED IN PHOTOGRAPHY. By John A. Tennent . 439
MAKING AND PAINTING BACKGROUNDS. By John A. Randall 443
PLAIN SURFACE SILVER PAPER. By T. Johnson Herrick 445
PHOTOGRAPHY IN THE SIEGE AT MAFEKING 447
PROOFS. By Wilbur Grubeman 458
THE USE OF POTASSIUM PERMANGANATE IN PHOTOGRAPHY 459
GUM-BICHROMATE PRINTS 462
NOTES ON COLD-SODIUM CHLORIDE 462
THE OHIO-MICHIGAN CONVENTION 464
SPOILED PAPER 466
OUT-OF-WORK. By Paul Clare 467
THE PHOTOGRAPHER'S WINDOW 468
THE MIDDLE COURSE. By Henry Johnson 470
FILMS 471
PHOTOGRAPHING MACHINERY 472
ORTHOCHROMATIC WORK 473
THE NEW ENGLAND CONVENTION 474

OUR PICTURES:

Portrait. From a Photograph by J. H. Kemp, Scranton, Pa.
American Portraiture: Eight examples of current work by E. C. Dinturff, W. N. Brenner, Louis F. Jansen, and Homeier & Clark.

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PORTRAIT

By J. H. Kemp, Scranton, Pa.

WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

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TO THE SECRETARIES OF THE STATE ASSOCIATIONS.

THE State Associations stand for progress and other good things. It has always been a matter of pride with us to help in their organization, to watch and report their growth, to foster their efforts in behalf of their membership, and to give their doings that generous publicity which fraternal associations deserve.

We are proud of the State Associations, and American photographers have good reason to be proud of them, not only for the very practical benefits and advantages they offer to the craft, but also because of the principles which they represent—the principles of fraternity, of mutual help and friendly rivalry. The work which the State Associations have done and are doing for professional photography in America cannot be overestimated. And it should not be forgotten that this work has been done, for the most part, by the officers of the associations.

To be elected for office in a State Association is an honor which has usually to be repaid by hard work. The bulk of the work in the associations falls upon the secretaries, and in a general way it may be said that the growth and success of a State Association depends very largely upon its secretary. Especially does this apply to the State conventions, upon which the hard-working secretaries spend their best efforts and abilities. As every photographer who has once filled the post of secretary to a State Association will readily confess, the amount of anxiety and labor involved in a State convention cannot be comprehended by any one "on the outside." Apart from the arrangement of proceedings and special features, the exhibition which forms the principal attraction of every convention demands untiring care and energy. And if the exhibition fails, the work of the convention loses, in a great measure, its attractiveness and usefulness.

In the midst of the thousand and one details of preparing an exhibition which will honor his Association, it is only natural that the overworked secretary may make mistakes or neglect some point which should be covered as a matter of policy affecting future conventions. We have been asked to call the attention of the secretaries of the State Associations to an evil of this sort which, unless remedied, may impair the usefulness of the State conventions. This evil concerns the treatment given to those who send complimentary displays of their work from States other than that in which the convention is being held.

It has become a common custom for the secretaries of State Associations to attend the national or other State conventions, and to secure there selected displays of work by prominent men as additional features for the exhibition at their own State convention. The idea is an excellent one and deserves every encouragement. So far the photographers invited to send their work for complimentary exhibition has shown a willingness to comply which indicates the best sort of fellowship. But we have had several complaints that this willingness to help has not received the appreciation it deserves. "Secretaries," said a photographer, "will move heaven and earth to get a collection of my pictures for their own particular convention. I send my work—which has perhaps cost me considerable in time, labor and money—and often after it is despatched I can get no word either of its arrival or return.

In many instances my pictures have been returned in such a condition as to be absolutely useless for any purpose."

Here we have a blunder which should speedily be remedied. It is true that, after a convention, the officers of our Associations are obliged to get back to their places of business and gather up the threads which have been broken by their absence in the service of their fellow-workers. But, as a matter of policy as well as courtesy, proper provision should be made, so that those who have supported the Association by contributions of their work should receive their loan-displays as quickly as possible and in good condition. More than this, a letter of thanks should properly accompany the pictures returned.

As we write a letter comes from a photographer whose work is invariably sought because of its attractiveness as an exhibition feature. He writes: "I sent six pictures to the ——— convention, but have not heard a word about them since they left here. Did you see them, or were they not hung? I think they (the officers) might have sent a word of acknowledgment." This is an instance where complaint is justly made.

We have pointed out this evil as one which may injuriously affect the State conventions, in whose success we are sincerely interested. It is a matter which should receive the most careful attention of all to whom are entrusted the duties of the secretaryship of our State Associations.

LIGHTING AND THE HANDS IN PORTRAITURE.[1]

BY FRANCIS PAULUS.

LET me, first of all, say a word about the excessive sharpness of definition which so many photographers get in their pictures. This sharpness destroys the artistic value of the portrait. By this I do not mean that your work should be vague and indefinite in form, but that a certain amount of atmosphere—the sense of intervening space—is desirable, and that we should focus so as to retain this atmosphere. Try to get the portrait of your subject as you see it with the eye, not as the camera (a mechanical instrument) sees it. The camera strips away the delicate sense of mystery—of atmosphere and softness—and gives us only the hard facts.

Another point is the choice of backgrounds and accessories. These should be infinitely varied in their effect according to the character of the subject. The essential relation of subject and surroundings is harmony. We must preserve this jealously, and see that there is no antagonism between them. If, for instance, we put a white dress against a black background, we will throw the dress out of proper relation. The contrast would be too strong. If we pose the sitter in a subdued light and use a gray background, the values will flow softly in and out of the picture, melting imperceptibly into each other, and we get an harmonious whole. Dark goods, especially silks and satins, can stand a dark ground, but it should not be as dark as the deepest shadows in the dress. Then the sheeny folds of the draperies will come away from the ground and round out the figure in a very desirable way.

I have done some little posing for what they call "Living Masterpieces," in which famous paintings have been imitated by figures sitting behind a screen, with black gauze thrown over it and the light thrown through the screen on the figures. The effect is startlingly like the painting, with all its softness and richness. I have often thought one could get a splendid effect by posing the sitter this way in the studio.

A small oblong opening cut in a card is a good thing to use in getting the subject properly placed in the picture space, as well as getting the lights and shades. We call it a finder, and we can immediately see the effect, practically framing the subject.

For strong effects the light should come from above the head of the sitter, thus making deep shadows under the features and bringing them in prominence. This is not a good lighting for a lady's face here; you want delicacy of tone, which can be obtained by having the light just above the head and a little to one side of the face, so that the face and features will model well.

[1] Read before the Ohio-Michigan Convention.

Leonardo de Vinci's portraits are good to study, also Vandyck's portraits of babies and women. Gainsboro, Romney, and Sir Thomas Lawrence also painted beautiful women, and all their light and shade effects were obtained by following the old masters. Most of my ideas of posing and lighting the figure I have obtained by studying the old masters—Rembrandt, Valesquez, Holbein, Titian, Vandyck, Franz Hals and others. Rembrandt stands first in light and shade, Valesquez in the delicacy and beauty of his compositions. A photograph will approach a reproduction of a great portrait only when that subtle lifelike quality is reproduced—the speaking, living person.

Harmony is the keynote to a great picture as well as to music. The light should come from a small opening and be concentrated on the face. Try and get the background luminous and atmospheric; it is this atmospheric quality which gives strength to the face and figure. There should not be too great contrast in the lights and shadows; strong lights and deep shadows give a metallic look to the features. Distribute your lights and shadows so that they will balance each other, and, if possible, leave something to the imagination. All facts and no poetry make a picture commonplace and prosaic. Keep your background subdued and place your sitter in position; now look at the face, and you will be able to see the accessories and surroundings, but in a vague and indistinct way. As the voice can utter but one note at a time, so the human eye can see but one object at a time distinctly. The camera, on the contrary, reproduces everything on the same distinct scale of equality, sharp in detail; therefore, your background should be as simple as possible, and if accessories are used the light should be so arranged as to lower them in tone.

When part of the face is in shadow, a little light should be thrown on the background next to the shadow. Do not use a background painted to represent one part lighter than the other; you do not get light values then, but color values, and it will not be consistent with the general lighting of the picture. Again, the light should graduate imperceptibly from the face, so that in a full-length figure the bottom of the figure should be quite low in tone. The hands should never be in as strong a light as the face. You have a scale of tones in photography, running from black to white; reduce this scale, cutting off the white and black extremes, and your scale will be gray-white, several tones removed from dead black.

There is no black in nature. The inside of a black hat placed a foot from the eye is not black; far from it. The atmosphere between you and the hat is sufficient to cast a haze over it. The darkest shadow in a face has considerable light in it, but the camera is so occupied with the lights that it slights what is absolutely necessary in the modelling of the shadows. By reducing the scale of tone-values you can bring out the reflected lights more. You may understand the workings of your camera to perfection; you may know every detail in the latest discovery; but, unless you dig and delve in the intricacies of light and shade, you will never be able to produce anything worthy of your art.

Now let us take up the treatment of the hands. So much of the character of the individual is expressed in the hands that it is astonishing how little attention is paid to them by photographers. When understood, the hands are as expressive of emotions as the face. One may conceal his emotion behind a placid face, but the hands will reveal the real feelings more or less. The character of the sitter has a great deal to do with the disposition of the hands. Do not try to pose hands, but study the way the hands would naturally fall. Just as surely as the sitter thinks you wish to photograph the hands they become a lot of clothes-pins, woody and unyielding. I have had my troubles in posing hands, and know the difficulty in getting a free, graceful moment.

A young lady, as a rule, in gathering a large mass of flowers to her breast, would use her hands and fingers in a delightfully graceful way; but try and pose the lady in a similar position, and she would hold the flowers as though each delicate stem were the branch of a tree.

Never allow the wrist and the hands to form a right angle; get as much of the curved line as possible. Above all things, do not get affectation in posing the hands, and have the hands appropriate to the pose. For instance, in a devotional pose,

hands with short plump fingers would not be consistent. I do not mean to say that short plump-fingered people are not devotional, but their hands do not properly represent that type. The famous portrait of Pope Leo, by Lenbach, shows the religious type combined with the desire to dominate in the long fingers; the forefinger is almost as long as the second or middle finger. In many poses the hands can advantageously be occupied in holding something. It is perfectly natural, for instance, for a lady to hold a fan or a handkerchief; in walking costume she can be busy with her flowers—anything to keep her hands occupied and to give grace and flexibility to them.

What a field for hands there is among musicians, pianists and 'cello players, or the violinists. What a beautiful picture could be made out of a young lady playing the harp. And in all these what beauty could be expressed by the hands. Photograph an orator, and the portrait would lose half the strength with the hands not showing. The finished actor is the one who knows perfectly the art of using his hands. Have you ever seen Sarah Bernhardt? In some of her most tragic moments she expresses her emotions simply by the play of her hands.

The hands are as full of life and expression as the face, and they usually act together; and if you notice the hands of people they are rarely in repose unless the mind is also inactive. One of the pictures I wished to show you was a reproduction of Guize's Prodigal Son. It represents the return of a prodigal son just after his father had drawn his last breath. The hands are so expressive in the way they show how each son was affected by the death—from the child not understanding what the tragedy was, but knowing something had happened, and flying to its mother for refuge, to the son beating his breast in an agonizing "Mea culpa." The hand can be as frail as a delicate lily, or it can be as an iron glove. It expresses love as well as hate; it assists the child in taking its first step, and closes the eyes of the dead. Without the hands we would have no history, except oral or tradition, and no monuments of the past. The hands deserve to be studied and their worth known, as being as truly indicative of the character as the face. I thank you for your attention, and hope I have interested you.

THE VIGNETTE.

BY G. E. LORING.

No fashion has had a wider popularity than the vignette, and none has more completely killed itself by its very success. The number of photographs which are vignetted are now so comparatively few as to suggest a revival of the style—*with discrimination.* The vignette, like most other innovations, was termed "artistic," and so fetched a slightly higher price. This was not all added profit, however, for the photographer who did good work found that in vignetting he had a larger proportion of spoilt prints, especially if the printing were done by some boy or girl.

There is no inherent defect in the vignette; it lost its popularity through being overdone, and it may regain it by being used carefully.

It is for a select, exclusive line that I suggest this style; but first I will speak of vignetting as it may be applied to the more general run of work.

There was one vital defect—from a business point of view—in the old fashion of the vignette: the vignetting was done in printing instead of during exposure. This, like so many things in photography, was merely a survival of an old custom from the days before photographs were supplied in dozens, and when one or two copies only of a vignette would probably be ordered. The way to make a vignette should be during exposure—that is, when a vignette style is known to be wanted. The operator is the best judge of the best vignette, and will make a much more satisfactory picture than a printer who simply chooses one from his stock.

A favorite way of vignetting was to place a screen with a large opening and serrated edges between the sitter and the camera. The sitter was taken through this opening and the out-of-focus edges gave a perfectly graduated vignette. According as this

screen was graded from black to white, so a Russian or a white vignette could be obtained, or any intermediate degree.

The vignette of the future must be based on this new idea of individual value in a photograph. Each one must be a "work of art" at work-of-art prices. It must not be a case of "plain photograph, $5 a dozen; vignetted photograph, $6 a dozen." Choose with discrimination the subject to be vignetted, and do not, even if your customer wishes, make a vignette of a subject which will not do credit to you. Take a delicate subject, say a young woman in delicate grays, or light colors and soft material, and make her the centre of a symphony in gray. Do not have a harsh distinction between her and the background. Let the whole be in one key, without running to indistinctness on the one hand or to contrast on the other. The vignette must be gradual and delicate. Do not simply use a pear shape (which is usually an abomination); do not use an oval unless you are sure it is the right thing; and, above all, don't simply chop off your sitter by vignette of the bottom part of the print only. See that the lines of the figure are graceful, falling in curves which are not antagonistic. Arrange your accessories, if accessories are advisable, with a view to a vignette. Don't have a palm which in a vignette loses its root and simply poses as a series of spiked leaves coming from anywhere and gradually becoming more distinct as they near the figure. Do not have a corner of a table and one leg and the rest of the table gone, and do not have half a chair with the back curving away outside of the picture, and the rest of it lost.

The easiest vignette, and the least satisfactory, is the bust. Fight shy of busts. Choose each vignette for its subject. Take a half length, or a three-fourth length, or even at times a full length. Don't emphasize the vignette; nothing must be too prominent; a carelessly executed vignette tells a person that she has got a vignette rather than that she has got a photograph. If a lady comes to you with a light skirt and a black or dark hat or waist, the black will throw the whole thing out of gear; do not make a vignette of her, but treat her in some other way. Do not make a vignette of a man in a frock coat; handle him in some other way.

The mount must also be chosen. There are some mounts which are safe for almost anything, but a delicate gray must be chosen which will carry out the unity of the picture. If a single white line can be ruled around the picture on the mount it may help things.

BETWEEN THE STUDIO AND THE PRINTING-ROOM.

BY JAS. RUFERT.

I RECENTLY had an opportunity to look over several hundred carefully selected prints, the work of a number of leading photographers of America. I have often heard rather disparaging things said about the profession, but it was a surprise to me to find that in one respect at least there was considerable justification for all the hard sayings. There seemed to be an almost total lack of the middleman who should come between the dark-room and the printer. Just think of taking up fifty prints in succession, and being able, without wishing to be critical or faultfinding, to find some obvious and yet avoidable mistakes in almost every one of them. It has been said that the photographer lacks the ability to apply the critical faculty to his own work; but I have not found it so. Repeatedly, when examining a print in the presence of the photographer, I have pointed out some detail and made some suggestion.

It may be that the light is too harsh on an elbow, or it may be some curve which is broken by a faulty line. Often some delicate detail has not been brought out; or, on the other hand, it may have been lost in over-printing. But point this out to the photographer, and he will at once see the defect, and if it can be remedied in printing he will make a new print. If it is some vital defect in the negative he will lose his pleasure in that negative and endeavor to secure a better one. The operator is usually supposed to be a man of art instincts; the printer is a mere mundane technician. Sometimes the

operator will discuss a negative with the printer, but more often not.

Several of our leading photographers will not admit that they ever make a masterpiece. They say that they are willing to place their names under *any* print they produce, for they will let nothing go out which they have not O.K'd.

A well-known instance is the veteran Gutekunst, who lets nothing pass on mere reputation. For years Falk has examined every negative, and suggested or explained to the retoucher or to the printer exactly what has been required. Hollinger once made the statement that he retouched eighty odd negatives in one day, and that he was his own and only retoucher. When we see the leading men of different lines of photography deliberately devote hours of hard work to this examination we are driven to ask how much of their success is due to it. Most photographers occasionally produce a good piece of work, but to find it you must turn over a big pile of mediocre work—enough to make one believe in the "chance" picture. Did they follow the Falk plan their work would be lifted from the commonplace.

Let the photographer sit at his desk and examine his negatives one by one. He need not hurry over them, but with many of them a few seconds will suffice. Here is a child, full of life and animation, and she stands against a chair of turned wood. If the chair is handled just a little—the strip of clear reflected light removed from each bar, the child will be the motive and central object of a successful picture. Here is a delicate subject, a lady in soft creamy drapery, with much rich lace. She is against a light background, and in places her dress almost seems to blend with it. Point out where a few lines will give a distinction between the dress and the background, and see that your man does the work delicately, to avoid the least appearance of harshness. If the printer needs a word of caution, let him have it. The lady will be pleased to see every scrap of detail in that lovely lace, but the printing must not be carried one degree too far.

Every negative, in short, requires a skilled opinion, and of such commercial value is this opinion that the successful photographer makes it a first consideration. It is a big factor in success, for the public is not quite so blind as some cynical people would have us believe. If a prospective customer has twenty friends who have all been pleased with the work of a photographer, that prospective one will make the twenty-first. There is very little of a "mysterious something" in photography, and not as much luck as is often supposed. There is usually a reason for success. There are half a dozen photographers in a large city who are reputed to have snug, paying businesses; and there are thirty smaller fry who look enviously at the bigger men and bewail their own hard fate. The town is overstocked with photographers, and everybody seems to go somewhere else for their pictures. All at once a new shingle is swung, and some hayseed stranger from wayback has entered the ring. In five years the countryman is getting the highest prices, and has scooped the most select trade. Why? Is it luck? Why did not the luck strike one of the forty men who have been in the city for so long? The new man knew what he was up against, and knew that he had a hard row before him. His competitors were six asleep and thirty incompetent, and he brought live methods and sound work. Such a man—I could name half a dozen—is the man who can hand you a dozen prints, and in each one of them you will see evidence of individual consideration. As much as any one thing this separate care is a factor of success.

These new men are rising from time to time, and there are more to come. It is an interesting process to watch. There is the gradual feeling after a something, and the gradual understanding of what that something is. Such men may work for years, apparently a hopeless task, but gradually they have evidence that their work is receiving recognition, and they feel and understand the principles on which they produce the work. With this feeling the dissatisfaction grows, for the village is small and circumscribed and the money is very slim. There is the period of unrest and uncertainty, and the man gets in touch with journalists and with successful photographers. At last he learns that it is not through his friends, but through himself, and he prepares to venture on a wide field. Such is the common evolution. The man has got there by hard brain work; he will keep

on gaining if he continues giving his judgment on each individual print. Whether young or old, successful or the reverse, the photographer cannot afford to neglect a personal supervision of the negative.

BUSINESS METHODS APPLIED IN PHOTOGRAPHY.[1]

BY JOHN A. TENNANT.

THERE is a common notion among photographers that business methods mean an elaborate system of red tape—bookkeeping, ticketing and checking the customer, his order, and every detail of the day's work. Now, while it is desirable that the photographer should keep his books in good shape, and have an intelligent control of his establishment and its working, the business methods which I propose to discuss do not concern those details particularly. What we are after this morning are those schemes, plans or methods by which successful photographers create business and make it grow from day to day.

The whole question of business methods was very aptly put to me a few days ago by Pirie MacDonald. He said: "Tell the boys that they must *make* business; that if they are content to take what comes to them they will end their days in the poorhouse." The man who grasps this idea has taken the first step toward better days. There has been altogether too much waiting for business in professional photography. The day has gone past when a man can hope by good work alone to draw people into his studio. The successes of recent years have been won by men who could think out and put in operation schemes by which business was brought to the studio. Here then we have the field for method in photography as a business. It covers the getting of business and then the successful management of business when obtained.

Mr. MacDonald has been very busy all summer. His methods (if we knew them) would give us some very interesting data; but he did not tell me anything of them. The fact of the matter is, of course, that it is impossible to set forth any business methods of universal application. What is appropriate or successful in Chicago may have no application in Boston. Methods which would be profitable in New York might be unproductive in Savannah or Kalamazoo. In short, it is obvious that the method must be evolved by the man, to fit the special requirements of his locality or the needs of the moment, or the clientèle he has in view.

How shall a photographer turn himself out of his rut and begin to infuse modern methods into the conduct of his business? First of all, by realizing the factors which are of most importance in business to-day: his personality; his methods of publicity; the character of his work, and his place of business. These must all play their part, both in creating and retaining business. Here we have points sufficient for our talk, let us try to cover them.

There can be no doubt about the great influence of a man's personality in his business. Photographers have been very much at fault here. They keep themselves too far behind in the social and business life of their cities. They confine themselves too closely to the mere following of their specialty, and their horizon is too often bounded by things which pertain to "cabinets" at so much per dozen. The successful photographer, or the photographer who would be successful, should take a wide and lively interest in the affairs of his town or of a good "set" in that town. This is necessary in order that he may know intimately "who is who," what is about to happen, and what chances there are day by day to improve his position in the community, to turn events to good business advantage.

There is a great deal in the point of view from which you conduct your business, the point of view, that is, which you take before your neighbors. It is not at all difficult when one is residing in any locality for a year or two to "size up" the more prominent people in that locality, to tell fairly correctly where they stand and the estimate they put upon themselves.

[1] A paper read before the New England Convention at Boston, September 13th.

And you may be very sure that the world will take you pretty much at the estimate which you put upon yourself. If your establishment is obviously behind the times, lacking in attractiveness or good taste, your business stationery crude and out of date, and you are seen to take no part in the public life about you, it is only natural that your townspeople will take you at your own estimate and conclude that you are a "back number." If we could run over a list of the most successful photographers in the United States, and see them as they are at home, we would find them all men vitally interested in the life and progress of their towns, wide awake to every possible advantage which this or that turn of events may bring about, scrupulously careful about their personal appearance and of their standing in the community; careful, also, about the appearance of their places of business. In fact you will find them known among their fellow citizens as men of intelligent enterprise and public spirit.

Let us now take up the detail of the place of business. It is most important that your public rooms should be not only clean and attractive, but also easily accessible and properly placed before the public eye. There is, of course, no excuse whatever for dirt and uncleanliness in the photographer's establishment, but photograpers do not always realize how unattractive their places are. They grow accustomed to the accumulation of rubbish, properties and discarded specimens which naturally gravitate about a studio. It does not seem to occur to them to look at their places from the point of view of my lady, who is careful about her dresses, and who has no pleasure in visiting the average studio because it is "such a dusty, dirty place." It would be well for photographers to regard their public rooms from the point of view of the physician (I won't say dentist), or the picture gallery. Let us have rooms which are evidently designed to give the visitor a good impression of the profession to which they are devoted; which will give the visitor the impression that the photographer follows an art rather than a mechanical trade.

This brings us to the important matter of display. Perhaps I am wrong, but I think that photographers over-reach themselves in this detail of display. Wherever one meets the photographer's place of business, the conglomerate collection of specimens of his work at every turn, in all sizes, colors and degrees of freshness, gives one a very "cheap" idea of photography—the idea of the machine rather than of an art. There is room for better methods here, of which, however, I have little time to speak. A small but choice display, changed every day or every week, will give the public a much higher idea of your profession, and the risk of showing poor or mediocre work will be largely avoided. Let me suggest to you that it would be well to make your displays not only smaller, and more carefully selected, but also more educational. Thus there can be little doubt but that the public would be interested in a series of little exhibitions giving, one after the other, a display of the advantages of carbon, platinotype, sepia prints, Aristo-Platino, and plain glossy prints in portraiture. A small descriptive card accompanying each display would, of course, add to the interest of the exhibit. Special displays of this kind, grouped around novel or practical ideas, will doubtless suggest themselves to you. For certain classes of trade a card, embellished with a photograph of course, inserted in the street-cars, would be a profitable method of display. Small exhibits in the public places of your towns also suggest themselves as likely to help in creating new business. It would be possible to talk all morning, or a week, about this one detail of the photographer's display, but I leave it to you, only emphasizing the desirability of making your display produce a better impression than can result from the average exhibit of the average gallery.

After display comes the question of methods of publicity. Here, again, the photographer is lamentably behind his times. Take the very simple matter of the photographer's stationery. Every communication you send to your customer is as important in a business way as a personal visit. When you write a letter to your customer you should be as careful about the appearance of that letter as you would be about your own personal appearance if you were to meet your customer. Glancing back over the business letters received from professional photographers of every class during the past ten

or eleven years, an experience covering many thousands of letters, I cannot recall more than a dozen instances where the printed matter was worthy either of the photographer or of his profession. Your letter-heads, envelopes, announcements and price lists, should reflect your individuality and taste equally with your portraiture. Many photographers excuse themselves in this matter by saying that they have not the gift of putting such things in shape. Nowadays, however, when every town has its artistic printer, or its advertising expert, this detail of appropriate business stationery should not present any great difficulty. The same thing applies to the "booklet," the little book which photographers issue to advertise their studios and capabilities and acquaint possible customers with little details which need attention in preparing for a sitting. It is astonishing that this method of publicity has not been more generally used. No profession lends itself so completely to the preparation and use of a dainty advertising booklet as that of the photographer. Thus, let us suppose that you have prepared for you a little booklet such as I have indicated. By leaving two or three pages blank, and mounting thereon for one effort a sepia print, for another effort a carbon miniature, and for another effort a platinum vignette, you have good material for three profitable excursions among the best people of your locality. And you may be sure that a little booklet, carefully written and printed, and illustrated this way, will not be thrown aside. Several papers dealing with the preparation of such a booklet have been published in the journals of late, and I would advise you to look up these papers, and lose no time in putting into circulation a booklet adapted for the trade you are seeking. If you cannot prepare the booklet for yourself, you will do well to get hold of some one skilled in the preparation of advertising matter, and pay him whatever is reasonable for the work.

About methods of handling customers, I can only give you a word or two. There should be more elasticity in dealing with your people than perhaps many of you have been accustomed to. Thus, the old-fashioned notions of prohibitory notices regarding the return of proofs, penalties on resittings, too much insistence about prepayment, etc., all these things are out of date, and have long been discarded in progressive studios. If you look at these things from the point of view of the customer you will see that they are against rather than for the growth of the business, clumsy methods of attaining certain ends which can just as surely be secured in more pleasant ways. A clever receptionist can make sure of payment, get all the proofs returned, and manage the detail of resittings without these clumsy methods of the old time.

Let me not forget the receptionist—generally and preferably, a woman of refined and gentle manners, well informed and specially gifted in handling people of varied dispositions. A woman especially who knows how to handle other women, and who can make herself beloved by the children who may visit the studio. A woman, also, who in a thoroughly suave and dignified way, knows just how to handle the young man of the period so that the photographer may be glad to have his business. What a power the receptionist is when properly chosen and trained. It is not too much to say that she can both make and destroy a business, if she has the amount of discretionary power given to her in some galleries. Let me put my finger here upon the mistake made in many galleries when choosing a receptionist. A photographer often values his receptionist according to her power of persuading more business than the customer intended in coming to the studio. The skill to do this is indeed worth a good deal, but the knowledge when and when not to use that skill is altogether more valuable. This "working" of the customer should be done with the greatest discrimination. People quickly jump to the fact that they are being "worked," and if it is overdone they will avoid the studio where such a practice obtains.

Let me relate to you how this practice of "working" the customer is followed in one of the largest studios of the West. The receptionist of that studio has a card index containing the names of all the most prominent people of the city, their financial standing and their circumstances. When a customer comes to this studio the receptionist skilfully holds him or her in conversation until an assistant has given her the card containing the record already

mentioned. According to the information given by the card the customer is thereafter systematically "worked," both at the desk and in the studio. It is unnecessary for me to detail how this "working" is done, but the system is worthy of a word or two. In so far as this and similar methods are useful in aiding the photographer or his assistants to handle his customers to advantage, they are praiseworthy. But where they are "worked" without the most careful discrimination they will, I believe, speedily degenerate into blackmail and end in ruin. Especially is this likely to happen in a studio where commissions are given to the employés for all work which they may influence or secure over and beyond that which brought the customer to the studio.

The use of the card-index system, by the way, occupies a special place among business methods of to-day. I have not time here to go into it, but I would urge upon you the advisability of looking into and getting a good grasp of the advantages of this system, both in labor saving and in "following up" lists of customers and similar uses.

Now let us take an actual instance illustrating many of the points I have mentioned, and contrast modern with old-fashioned methods. Some time ago I had a visit from a friend who has for some years resided in a flourishing Western city. As an amateur he had made a specialty of portraiture, and naturally his ideas gradually turned toward the making of portraits in a professional way. His moves were most interesting. His position in his town had given him an intimate acquaintance with the best known men in the business and social life of the place. To complete this acquaintance for business purposes, he cultivated a little group of women journalists who had charge of the "society reporting" for the local papers, and won their interest and help. When he was ready for business they could tell him just who was at the top in current events, could furnish him with lists of desirable patrons, and inform him before hand of social affairs which he might possibly be able to turn to business advantage. He saw that the local professionals (being asleep) had clung to their down-town studios; were neglectful of modern ideas, and that their places of business were inaccessible, guiltless of elevators or similar conveniences. He perceived, too, that their point of view was too "cheap" for the best people of that town, and that consequently much of the most desirable work was going to a nearby city. What did he do? Selecting a corner lot in the residence section, away from the dust and bustle of the town, he built himself an artistic studio; kept his rooms all on the ground floor; made sure of a spacious skylight and public rooms with ample room for display; got an expert to prepare a campaign of advertising or publicity to cover the first year; inaugurated, to accompany this campaign, exhibitions of work at the studio; placed month after month, by means of his society lists, attractive announcements of his studio with specimens of his work, among the desirable people of his locality; would make nothing but platinum and carbon portraits, and fixed his prices at $10 and $15 for a dozen cabinets. What happened? He succeeded from the start, and to-day is building the best business in his town, while the old-style professionals are grubbing along, complaining more profusely than ever.

Some days ago the business methods employed by Strauss, of St. Louis, were under discussion. One who knew Mr. Strauss and his methods intimately said: "He has a beautiful place, a staff of clever assistants, and he does beautiful work; but it is my opinion that the biggest feature of his establishment, the thing which impresses people most when they visit the studio, is the wonderful courtesy which is extended to all visitors, whether they come for business, curiosity or pleasure. You know, of course, that the Strauss studio is one of the show places of the town, and that people have got into the habit of taking their friends to see the studio as a local institution. Mr. Strauss has three assistants entirely devoted to the work of showing visitors about his beautiful rooms, making his customers comfortable during their stay there, etc. Then his "convenience department" has been a big feature. There are no banks or express offices within a mile or so of the studio. Seeing this Mr. Strauss created a department where the people of his locality could obtain small change, or have their checks cashed, or leave parcels for collec-

tion by the various express companies, without the bother of sending into the city. These conveniences and everything else about the gallery are held open to the public, and the popularity which Strauss has gained in St. Louis has been won quite as much by his generous hospitality and courtesy as by his portraiture." This, of course, refers to the gallery which was burned down some months ago. I merely relate the conversation to you, so that you may have the suggestion which it offers.

In this way we could go on from sunrise to sunset, discussing the thousand and one points at which modern methods or intelligent enterprise along definite lines might be advantageously applied in professional photography. I have, however, wearied you sufficiently for one sitting, and therefore make an end, with my thanks for your patience and attention.

MAKING AND PAINTING BACKGROUNDS.

BY JOHN A. RANDALL.

DURING the winter months the photographer must always have slack days. Knowing this, it is surprising that so few make preparations to occupy the enforced leisure in the profitable pursuit of background painting. I could instance professionals who use the same background day after day, month after month, until its constant appearance in every portrait cannot but make their clients rebel, seeking novelty and a rival photographer.

One of the leading professionals, noted for easy and graceful portraiture, is not above painting a special background to suit the individual sitter, or half a dozen for as many different subjects; and the enthusiast who can follow this example is certain to rise above men who remain content to buy two or three backgrounds yearly, using them mechanically for every composition.

Want of skill in drawing is the first obstacle to discourage the majority of photographers, and it is a matter of regret that they pay so little attention to this art, when it should be regarded as an essential part of the training of every operator; until it is so regarded the painted background will remain unsatisfactory, since it is an aid in portraiture that can only be properly utilized by each worker painting his own.

The background gives style to a picture, it being remarkable how the individuality of a man will appear in his work if he uses backgrounds painted by himself. The style of a painter can also be caught by copying his backgrounds, and using them in a portrait. Gainsborough, Reynolds, Lely, or any of the old portrait painters with a marked style, may be imitated by such devices. Some of the work of the above-mentioned photographer is of this character, and his mastery of natural and simple posing is so complete that his imitations have all the spirit of the originals. It is a practice scarcely to be encouraged, though its success is a proof of the photographer's abilities. Professionals may often, however, employ it as an attractive novelty.

Elaborate backgrounds depend for success on power in drawing. Apparently the work is very free; actually it requires considerable artistic skill to produce the effect aimed at. With absolutely no knowledge of drawing, one can still make plain or clouded grounds; and, since the practical treatment is alike in both cases, the following description will be confined to the latter, leaving the worker to express his artistic notions according to personal taste and the accepted rules of lighting and composition.

Preparing the Calico. The first need is calico of the kind known as "sheeting," this being usually stocked by dry goods stores, the width ranging from 72 inches upward. It may be of the bleached or unbleached variety, also of such a length that it consists of a single sheet, without seam or joint, of the size of background required. If it is to be used on a roller, a rough wooden frame should be made to hold the sheet during the coloring operations. For convenience of working it is best fixed against a bare wall, taking the precaution of having a framework 2 inches in depth to keep the calico well away from the wall; otherwise, in subsequent pro-

cesses, it may slacken and stick at the back. For a stretched background, a well-made frame of the usual kind, of wood not less than 2 inches square, will be needed. To allow of tacking along the sides it is as well that the sheet lap over the framework 2 inches all round.

The calico is next affixed, the work being done in one particular way. The sheet is laid over the frame, and first secured at the centre of each of the four sides, pulling it tightly across, driving the tacks along the edge, and not into the front. These points secured, the tacking is continued from the centres toward the corners, keeping the calico quite tight, and inserting the tacks a few at a time on each side in rotation, finishing up at the corners simultaneously. By this method the sheet can be evenly stretched, and all rucks and creases avoided.

Sizing. The calico is now ready for sizing. A best quality whitewash brush, one having long, flexible hairs is obtained; this is not a cheap article, but to use an inferior brush is to court failure. The common size used by decorators is employed; it is put into a convenient vessel, just covered by water, and dissolved by means of a slow heat. The exact strength is not material, but it should be of such a consistency as to flow easily over the sheet. When dissolved the solution is strained through canvas to remove all particles, and finally applied, while still hot, to the calico. The application must be regular, the brush being worked in all directions, taking special care that every part of the surface is touched. No bare spaces must be left, nor the size put on in patches. This done, it is left to dry for about twenty-four hours. Some prefer to apply two coats of a very thin size, though this is not necessary if a single coat is put on with care. Enough size is melted to cover the whole sheet; roughly, a background 8 feet square will soak up from a half to three-quarters of a house-pail of solution.

Mixing the Color. The next step is the actual coloring. For a plain background the proper shade is put down at once, whilst for a scenic background the middle tone is first put on, and the lighter and darker details worked in afterward. For general photographic work lampblack, whitening, and ultramarine blue are the only powders required, as every shade of slate color can be obtained by mixtures of these.

The whitening is placed in a pail, covered with water and left to soak and dissolve. Meanwhile the lampblack and blue are made into pastes with water on a stone slab by the aid of a palette knife, and are ground down to a smooth creamlike mass. The whitening, after being well stirred, is allowed to settle, and the superfluous water poured off. The lampblack and blue are then added to the whitening in the right proportions to procure the shade of background that is wanted. As all powders dry light, the wet mass should appear much darker than the finished color is to be. On this account it is advisable to spread a portion over some surface, leave it to dry, and thus secure a guide to the depth of the final shade. The correct shade arrived at, a solution of hot size is added to the mixture until it becomes sufficiently fluid to apply with the brush. This, in practice, means that it will be hardly so thick as cream, and yet not so watery as to run when put on the calico. The proportions usually taken are one pound of size to three pounds of whitening and color. Some recommend using the mixture when cold and in a jellied state, but in my experience the hot mixture is more simple to deal with. Before use the color, while at its hottest, is strained through a coarse mesh to remove any impurities.

Applying the Color. The whole secret of background painting consists in the method of laying on the color. A common, stumpy brush is of little use, for a whitewash brush having a good spring is a necessity. To ensure success a platform must be erected, in order that the upper part of the background is within easy reach, and making it possible to pass rapidly from one end to the other. The platform ought also to admit of quick removal, so that the lower half of the background may be immediately accessible. Enough color to cover the whole calico should be mixed, which will mean about the same quantity as for the sizing. Have the solution almost boiling, and, when ready, commence at the extreme top of the frame. Move the brush in every direction, working quickly downward, and always keeping a good flow of color in the brush. In no case must the edge of the color be left to become dry; this is a most

important point, for every such dry edge will show as a streak in the finished background. Make no pause in the work when once started, and keep the edge of color across the whole background continually moist. With a very large surface it is as well to have two persons working together. Taking these precautions the surface, when dry, will present a uniform tint without a trace of inequality.

Shading and Drawing. On such a ground any darker tint having a sharp outline might be laid down in a similar manner. To produce shaded effects more skill is needed. The straightforward way is to work them in while putting on the ground. This demands an assistant, one worker starting at the top with a pail of light color, while the other commencing from the bottom, or any given direction, with a pail of another shade, and when one approaches the other the two are skilfully blended. As a rule backgrounds are shaded from top to bottom, though the choice is not limited to this one method, for the plain shading of backgrounds might rise to an art.

Any one who wishes to really learn the possibilities of a plain surface under artistic treatment should study the bare walls so often seen in paintings of the Dutch school. It is scarcely correct to call them "bare walls," so full are they of shadows and delicate gradations that lift them into the region of art. Certain it is that the pillar and curtain enter largely into the scheme, not for themselves, but rather as a means of throwing shadows on walls to secure the needed relief. It may be that many photographers use like accessories for the same object. Following along these lines we might have backgrounds shaded in many different ways, as various indeed as the shadows which fall upon the walls of a room.

On a plain ground many subjects can be sketched with chalk and charcoal. It is not recommended, as the powder is apt to rub off, and chalk is far too glaring. The better plan is to mix powders with size, and use them as ordinary paints. A pure white is employed with caution, and, in general, the high lights in a background should be in a much lower key than in ordinary color painting. The cheap background of commerce is usually in far too high a key, being much improved by toning down.

A final point needing some attention is the position objects depicted in a scene are to occupy. Photographers often think some natural view would make a good background, but a very small proportion of natural "bits" can be pressed into the service. In nearly all cases some angular object cuts the outline of the sitter. For ordinary studio work it is as well to leave a bare space in the centre of a background, and to merely suggest accessories at the sides. Another course is to avoid all abrupt lines by shading surrounding objects into the space around the sitter's position. A third method is to paint one half of a uniform tint, to pose the subject against this, and to fill in the remaining part with slight detail.

Scenic backgrounds have been somewhat overdone by the professional, and, in my opinion, much finer effects in portraiture could be composed by following the Dutch painters in utilizing the simple shadows obtainable upon a bare, uniform surface—a system, that is, of straight line shading in contrast with the clouded background now so much in vogue.—*British Journal of Photography.*

PLAIN SURFACE SILVER PAPER.

BY T. JOHNSON HERRICK.

It may be heresy to say it, but even art may work its own destruction by overdoing it, especially if art is only fashion. Only the fact that some slow-moving photographers still use a glossy paper prevents some advanced amateur from discovering the beauties of detail and texture, and teaching us that albumenized paper is the true and only.

Every photographer who was in business in the seventies sensitized his own paper, and there is now growing up a tendency to revert to the same practice—at least in experimental work.

The "beginning of things" in silver printing is that silver chloride darkens on exposure to light, the image being of a violet tint, from which, if placed in water,

free chlorine will be liberated. The light, therefore, converts silver chloride into sub-silver chloride and chlorine gas. When the sub-silver has been formed and is fixed by means of sodium hyposulphite it dissolves the silver chloride, leaving metallic silver. One would almost think this would make a printing process, but it is not so, as without some other substance the image does not go deeper than this violet tint which almost fixes away. However, if brought into contact with some organic substance, such as albumen, gelatine or arrowroot, the image prints of a reddish color, and on exposure to light will go through all stages to almost black, showing that some organic substance is required to aid the decomposition. There is one matter to be noticed if we wish to arrive at this black stage, which is that the silver must be in excess of the chloride in the proportion of 1 to 8.

The choice of paper depends on the preference of the worker. There is usually a sufficiency of size in most papers, but very rough papers may be improved by brushing over with a 2 per cent. solution of gelatine in water.

The salting of the paper may be with any of several chlorides. I use common salt (sodium chloride), but ammonium chloride is preferred by many. In the following formula 90 grains of ammonium chloride may be substituted for the grains of sodium chloride.

A medium strength of salting bath for negatives of average density is 8 grains of sodium chloride to the ounce of water; and if tones tending to a platinum black are required, ⅛ of a grain of potassium bromide should also be added to an ounce of water. For results tending toward sepia a minute trace of potassium bichromate should be added, just sufficient to give the bath a pale lemon color. If the negative to be printed has excessive contrasts weaken the bath to four or even three grains of chloride to the ounce; but if the negative is thin increase the strength to eight grains per ounce.

The formula reads thus:

Sodium Chloride, . .	120 grains.
Potassium Bromide, . .	2 "
Potassium Bichromate, .	⅔ grain.
Water, ...	14 ounces.

To salt the paper flow the solution into a shallow flat dish and immerse four or five sheets in it. Put the sheets in one at a time, and brush each one lightly, turning it over to brush both sides to rid it of air bubbles. By the time the last sheet is in the first will be sufficiently soaked, and may be hung up in a wooden clip to dry. This salted paper will keep any reasonable length of time, and should be kept flat between leaves of clean (unprinted) paper.

The difficult (or the careful) part is the sensitizing. This should be in a fairly strong bath, say 55 grains of silver nitrate to an ounce of water, and this solution should be either quite alkaline or quite acid. The alkaline bath is made by adding carbonate of soda until red litmus paper turns blue. Paper sensitized on this bath gives the best prints, the only fault being that it does not keep for more than two or three days, so should be used up at once. The acid bath is made by adding 25 grains of citric acid to each ounce of solution, when the paper will keep for a week or a fortnight without discoloring, although all acid paper generally tones badly and dries rather weak. Sensitizing may be done either by brushing or floating. The simplest form of brush is a piece of swansdown calico, doubled in two, and in the middle of which a piece of celluloid is placed. Two quarter-plate pieces of glass are now placed on the outside, allowing about one inch of cloth to project. This, when tightly bound, makes a brush somewhat like a very soft squeegee.

For sensitizing by floating mix sufficient silver bath (1 part silver nitrate to 8 parts water) to cover the bottom of your dish. Take a sheet of paper, curve it outward, and lay one corner on the solution, and then gradually lowering the whole, let it remain for a few seconds. Raise one end and afterward the other, and if any air-bells be seen burst them with a glass rod or match stalk. Let the sheet remain on the bath till it lies perfectly flat, then taking hold of two of the corners draw it slowly over the edge of the dish. This drains off much of the solution, and the paper is then hung up in the dark to dry; before it is "bone dry" the paper may be again floated for a moment; this second floating sometimes results in a rather richer print.

Let the paper be thoroughly dry before printing, and a varnished negative should be used to avoid any possibility of silver

stains on the film. The printing should be carried rather deeper than is usual with emulsion papers, as much depth is lost in the fixing. After coming from the frame they should be of a purple color, and after being well washed in several changes of water should become of a brick-red tint. If they remain purple in the fifteen minutes' washing they should be immersed in a solution of bromide of potassium made by dissolving half an ounce of the bromide in 10 ounces of water. A dip in this is sufficient, when they will immediately turn a bright red—just the color for toning. The last washing water should be perfectly clear, having no milkiness, which is free silver nitrate in the form of chlorine.

The image can now be toned in any bath the operator may think fit to use, platinum, or gold with borax, lime, billiard chalk, sodium tungstate, sulphocyanide, or combined toning and fixing, the only difference being that for plain paper the bath should be diluted to half the strength of what is required for a gelatine emulsion paper.

Toning is stopped by placing the prints in a solution of common salt—say a half heaped tablespoonful in a pint of water. Fix for ten minutes in a weak hypo bath, 1 ounce hypo, 10 ounces water, and wash in running water for a couple of hours. This should ensure permanence in the prints, without rotting the paper.

PHOTOGRAPHY IN THE SIEGE AT MAFEKING.

A SIDE episode of the war in South Africa, and one which is of interest to photographers, is the manufacture of "notes" or bills during the siege of Mafeking. When Cronje, and afterward Snyman, closely invested the little frontier town, many things grew scarce, and among other things the stock of available gold. To meet this deficiency Col. Baden-Powell commenced the issue of bills, from a fractional currency of a quarter up to a value of five dollars (one pound). For the lower values a printing press was deemed sufficient, but for the "one pound note" something better was wanted, and the commanding Colonel designed a spirited note for reproduction by photography. The right man to do the work was at hand in a Mr. Ross, an amateur, resident in the city. Before the siege commenced Mr. Ross had purchased the entire available stock of photographic requisites, which proved to be little except plates, and during the siege he was busy with his camera, and doubtless secured a most interesting and valuable series of negatives.

To design the note was easy. Colonel Baden-Powell, who could make a living as an artist in black and white were he not a soldier, himself undertook the work, and turned out an effective design on the most approved rules of "pyramid composition" so dear to photographers. In the centre, over all, flaps the Union Jack, and besides it a man of the Rhodesian regiment stands erect. On one hand is "Wolf," the home-made howitzer of the city, and on the other a fair young matron kneels and clasps her baby. The angles of the pyramid are formed by two crouching figures: one, a member of the town guard taking aim, the other a loyal Dutch watching the effect of a shot. The inscription promises redemption of the note "on the resumption of civil law."

When the design was completed six negatives were made from it, and the question of a printing process was faced. Paper there was none, and it was decided to try to manufacture ferroprussiate paper The materials required are potassium ferricyanide (red prussiate of potash) and ammonia-citrate of iron. The prussiate was plentiful enough, but the supply of ammonia-citrate of iron was a very limited one. The whole of what was in the town was speedily used up, but some more was brought—in a little pot—from the north, by a native runner, and this had to last for the rest of the siege. The paper used in making the notes was ordinary note paper, of which there was a plentiful supply.

Every night paper was sensitized ready for next morning's printing. The printing, in the blazing sun, took only some ten to twenty minutes, according to the density of the negative. The "Mafeking Mint," as the work-room was facetiously called, was an underground cellar, and lived unscathed through the siege, though one of the negatives was smashed by a

fragment of shell, and once a shell burst so close to the door (or mouth) of the mint that Mr. Ross, who was standing there at the moment, was sent head-over-heels to the bottom. It is a vivid commentary on the scarcity of things that one of the most serious difficulties was the lack of pure water in sufficient quantity for the work of washing the prints to fix them. At times it appeared as if lack of the raw material would necessitate a close down, but a little more water was always discoverable in time.

The photographer at times found callers a bore, and so he flew a shingle whereon was writ large "No Admittance;" but the only result was to call forth a grin and the remark "I'm coming in." In all some five hundred blue-print notes were issued, and they have proved a profitable issue, for so much are they above par that not one of them has been presented for redemption, nor likely to be. Reproductions of the notes, together with portraits and other interesting items, are given in the issue of *Photography* of August 30th, from which, too, these few notes have been taken.

PRACTICAL METHODS AND FORMULÆ.

Rapid Development. At a recent meeting of the L. and P. the subject of rapid development was introduced by Mr. Henderson, and of which he gave a practical demonstration. A plate exposed behind a Warnerke sensitometer was developed to full density in a space of five seconds. The negative possessed excellent gradation and gave a reading of fifteen. The formula by means of which this result was obtained was as follows:

No. 1.	Hydroquinone	20 grains.
	Metol	20 "
	Adurol	40 "
	Sodium Sulphite	480 "
	Water	8 ounces.
No. 2.	Potassium Bromide	10 grains.
	Sodium Hydrate	120 "
	Water	8 ounces.

Equal parts to be used.

Mr. Henderson did not recommend the method for ordinary development, but thought it would be exceedingly useful where a large number of negatives of the same subject had to be produced for commercial purposes.

Keeping Carbon Tissue. When sensitized carbon tissue has to be kept in stock for a few days before printing, or when it is impossible to develop the proof immediately after printing, the tissue should be stored in an air-tight box containing a quantity of pumice-stone, which has been soaked in an aqueous solution of calcium chloride, and afterward thoroughly dried. The pumice should not be allowed to come into contact with the tissue, but separated from it as in the platinotype storage tubes. In this way sensitized tissue may be kept in good condition for a considerable time. As, however, the gelatine becomes very brittle when robbed of its moisture, the tissue should be placed in a damp dark place for a few minutes to render it flexible before attempting to place it in the printing-frame.—*Photography.*

Treatment of Over-exposed Plates. The following method suggested by M. Schmidt, of Munich, is worth a trial with plates which have been considerably over-exposed. Immerse the plate in an ordinary alkaline developer. When the image and the veil of over-exposure are just apparent, wash the plate, and immerse it in a 5 per cent. solution of silver nitrate. After this the plate may be developed after the manner of the wet collodion plate, the following developer being suggested for obtaining extreme density: A. 10 grains of pyrogallol in ½ ounce of alcohol. B. 4 grains of silver nitrate; citric acid, 200 grains; water, 1 ounce. For use, take 1 drachm of A, add 1 ounce of water, and at the moment of using add 1 drachm of B.

Platinotype. To impart a richness to platinotypes some photographers are polishing them with a paste. From the samples we have seen, it is a practice which may very easily be overdone, but we give what is perhaps the best formula for such a paste: 1 ounce benzol, 1½ ounces alcohol, ¼ ounce oil of lavender, 2 ounces white wax, 20 grains gum elemi. The paste is gently dabbed onto the print with a wad of soft cotton, and the print polished with another clean wad.

AMERICAN PORTRAITURE

I. By Homeier & Clark, Richmond, Va.

AMERICAN PORTRAITURE

II. By W. N. Brenner, Cincinnati, O.

AMERICAN PORTRAITURE

III. By E. C. Dinturff, Syracuse, N. Y.

AMERICAN PORTRAITURE

IV. By E. C. Dinturff, Syracuse, N. Y.

AMERICAN PORTRAITURE

V. By E. C. Dinturff, Syracuse, N. Y.

AMERICAN PORTRAITURE

VI. By Louis F. Jansen, Buffalo, N. Y.

AMERICAN PORTRAITURE.

VII. By Louis F. Jansen, Buffalo, N. Y.

AMERICAN PORTRAITURE

VI. By Louis F. Jansen, Buffalo, N. Y.

AMERICAN PORTRAITURE.

VII. By Louis F. Jansen, Buffalo, N. Y.

AMERICAN PORTRAITURE *

VIII. By Louis F. Jansen, Buffalo, N. Y.

* This reproduction is hardly fair to Mr. Jansen, the engraver having cut out the background and thus rendered the scale of tones false and displeasing.—ED. W. P. M.

PERSISTENCE.

WHAT is wanted in business to-day is persistency, and never was it more needed than at the present time, when business is for the most part a fierce battle in which men have to fight as for their lives. The difference between a successful and an unsuccessful man is generally a difference in their characters in respect to persistency. You may have every other good quality of a business man, but if you lack persistency you are almost certainly bound to fail. A business friend of ours once remarked to us that "persistence and push" comprised his motto in business. Most people might be apt to say at first thought that the two words mean the same thing. But that is not so. "Push" means the making of an effort, but "persistence" means the maintenance of the effort, or, to put it colloquially, keeping it going. We know many men who have got plenty of push, but who have never become successful in life because they have lacked persistence. They are a class of men who never stay long in a place; they start with plenty of push and plenty of determination, but by and by it fizzles out because they haven't the persistence to keep it going. Often enough such men are of brilliant genius, they may be skilled in handicraft, rich in inventive knowledge, full of resource, their moral character may be irreproachable, their education and attainments unquestionable, but they lack the one thing needful in business—persistence. Thus they fail, and they go through the world quarrelling with their fate, wondering why other men far less talented seem to get on and become successful, while they are left behind in the race. If you were to tell them that it was because they lacked persistency they would not believe it, because they do not know the true meaning of the word. There are very few men who do, otherwise they would more generally practise it as one of the cardinal business virtues.

Persistency covers a multitude of good points. It means continuance in action, to hold on, to keep up, to carry on, to pursue a thing. It also means sticking to, pegging away, harping upon, keeping going, keeping the pot boiling, keeping the ball rolling, keeping the thing alive. That's just it, persistency is movement. You may push with all your might, but if you don't make something move your effort is wasted. Philosophers tell us that *force* and *motion* are two very different things, though one may produce the other. It does not always follow that force applied will produce motion, but motion invariably produces force. Thus we see why persistency is even more important than push. Men will push you along if you seem to be going along, but if you falter on the road, they either hesitate or help to push you down. Thackeray says pithily, "You must tread on other people's toes or they will tread on yours." Every man who would succeed must have the talent to climb and the power to sustain himself when he gets there.

We often hear it said that such and such a man's success in life is due to his perseverance; but that means just the same thing as persistency. Others are pointed out as being successful through plodding; it is the same thing again, still persistency. Again, we say a man succeeded because he was consistent; true, yet he couldn't be consistent if he was not persistent. So it all amounts to the same thing in the end. Persistency is what we want, for if we have persistency we must necessarily have decision of character. The man who is perpetually hesitating which of two things he shall do first, will do neither. The persistent man, before doing anything of importance, will first consult wisely, then resolve quickly, and finally execute his purpose with inflexible perseverance, undismayed by petty difficulties which would daunt weaker spirits. There are thousands of men in business who are brilliant in conceiving things, or pushing in getting orders, but they fail for want of patience to carry matters through the trials and difficulties with which every business is beset. They begin well and mean well, but they end up badly. They are tired of the duty of executing an order before they are half through with it, so they cast it aside and start something else, which in turn gives place to some other new "fake," as the saying goes, until they are in a state of hopeless muddle-headed confusion, and the persistent man has to be called in to

help them out. The men who are "to one thing constant never" are a numerous class, and the curious thing is that they generally pose as "smart" men of business, and even get credit for a time, but it is soon found out that this smartness is spurious coin which they have to pass somewhere else where they are not known, until they come to the end of their tether and end up their days ignominiously.

Depend upon it, the persistent man is the one who wins all the time. He may seem a bit slow alongside the so-called "smart" man, but he stays on while the other goes. "The mills of the gods grind slowly, but they grind exceeding fine." And so it is with the work of the persistent man. It was the tenacious genius, the slowness, and the prudence of Wellington which baffled the rapidity and daring of Bonaparte and his brilliant tacticians, and in a later day it was the man who knew how to "sit tight" that defied the overwhelming odds against him in the siege of Mafeking. In all history it will be found that brilliancy does not count against persistency, though we often speak of a man as brilliant when we ought to have said he was persistent.

It is impossible to give any set rules for persistency. A man must know what persistency means and strive with all his might to live up to it. And it will need all his striving; it is so easy to get into the rut and let things take their course, pursuing the even tenor of one's way—heedless of circumstance—a policy which is the very antithesis of persistency. We are almost afraid the persistent man is born, not made, but there may be hope for some, otherwise our "straight talk" will have been in vain.—*Penrose's Process Work.*

PROOFS.

BY WILBUR GRÜBEMAN.

In a recent issue of this Magazine I saw an article by Mr. Tennant on the iniquity of the present system of proofs.

He is right; the system is bad; and not the least of its bad features is its tendency to cheapen work. The protest has been made before, and will have to be made again, perhaps many times, before the photographer can shake off the miserable custom. As it can scarcely be a mistake to repeat so needful a thing, I send a short protest against the habit, which was penned many years ago, by Mr. J. H. Lamson (I believe) of Maine: "It is really fast becoming an acknowledged fact that of say five half-printed or toned and fixed proof-prints from unretouched negatives, taken from the studio by our patrons, for their hundred friends and acquaintances to criticise and decide upon, four are returned as "unsatisfactory" generally (where part payment has been made in advance), with the gracious statement that they acknowledge that the picture is first-class, and all that, even that the likeness is remarkably good, yet some of their friends do not like it, and think they can do better, consequently they have decided to try again, and will allow or permit us to make another effort.

If, as in many studios, no part of advance payment has been demanded, nine times in ten the artist, in such cases, never sees his sitter again; and some other photographer is allowed a second, or it may be a third or fourth trial, to suit all the before-mentioned hundred friends.

We all feel the injustice of this state of things keenly, especially after doing our very best to suit, freely giving our time, material and thoughts to our work, feeling that we have produced a really artistic picture, or perfect as may be in our power, both as a pleasing likeness of the sitter, also technically as a good photograph in every sense of the word, and, in our short-sightedness, vainly thinking we shall undoubtedly receive a larger order for so successful an effort on our part.

Now I submit this statement to my brother artists as nothing more than simple truth, that "we almost universally feel a sort of smothered sense of wrong and injustice while making these graciously granted second sittings," also that few true artists can really take but little interest in these after-efforts under such circumstances.

While in New York a few weeks since I had quite a lengthy conversation upon this important subject with one of our best

known and most prominent artist photographers, during which he made the following statement: "Re-sittings had come to be such a matter of course in our establishment, where proofs from unretouched negatives were allowed to be taken from the studio for their friends to criticise, that in very self-defence we had adopted a rule never to allow untoned proofs to leave our studio." He said "after some months' trial he now found the regulation to work admirably, and that by its adoption he had since saved over 50 per cent. of the customary re-sittings. Proofs were shown the sitter in the studio, and also to such friends as might chance to be present, and a decision asked for after due examination. At the same time, when necessary, the reason why, plainly given, for not permitting the proofs to leave the studio. Now here is a very excellent idea and plan, found to be practically successful in the regular daily working routine of one of the largest photographic establishments in the United States. Why not make this plan, or something like it, universal, and bring about as far as possible, its general adoption throughout the country."

There are several remedies for this injustice, and perhaps no one of them will fit every case. Here and there—but very rarely—a photographer may hit the ideal state of being able to send out nothing but finished prints, and let the customer either take or leave them. But the average man has a serious condition before him; and it is one which will bear ventilation at our conventions.

THE USE OF POTASSIUM PERMANGANATE IN PHOTOGRAPHY.

BY PROFESSOR R. NAMIAS.

At the Italian Photographic Congress at Florence in May, 1899, I was able to announce two photographic applications of a solution of potassium permanganate acidified with sulphuric acid. The one the reduction of negatives, and the other a means of making positives direct. Since that time I have continued to experiment with this reagent. It appears useful for several photographic purposes, and the result of these experiments will be found in this paper.

I should like to say beforehand that for the reduction of a gelatino-bromide negative permanganate has received general approval. Many amateur photographers, as well as many professionals in Italy, have informed me that they regularly employ it, and are very well pleased with it. It softens negatives that are too hard in a perfect manner without attacking the gelatine, while its cost is practically nothing. I know also that it has been adopted for reducing prints on bromide paper, and a well-known amateur writes me that since its introduction he has succeeded in saving every bromide print, however much overexposed, which, before this reducer was known, would have been so much waste.

It may be well to quote the formula for this reducer once more. It is as follows:

Potassium Permanganate, .	½ gramme.
Commercial Sulphuric Acid,	1 cc.
Water, ...	1000 cc.

When the negative is sufficiently reduced it is taken out of this, and if it shows any slight yellow tinge due to the deposit of manganese binoxide, it is immersed in a 1 per cent. solution of oxalic acid. This completely removes the stain.

An application which will appeal to photo-engravers is its employment on collodion negatives taken through a ruled screen.

I should like to call attention to one fact which seems to me strange. It is known that the solution of ammonium persulphate discovered by Messrs. Lumière and Seyewetz acts as a very energetic reducer on gelatino-bromide negatives. I would point out that this same reagent has no action on collodion negatives, when the solution of persulphate is acidified with sulphuric acid. This different behavior of the two images, in collodion and gelatino-bromide respectively, may have an important bearing when one considers the nature of the image in the two cases and the method in which ammonium persulphate acts.

On the other hand, permanganate differs from persulphate, since in a solution acidified with sulphuric acid it exercises on

collodion negatives a still more energetic action than on gelatino-bromide negatives. It must, therefore, be used in a more diluted solution, in order to ensure regular action when it is to be employed to reduce collodion plates.

In my own practice I keep a concentrated stock solution made up as follows:

Potassium Permanganate,	2 grammes.
Commercial Sulphuric Acid,	20 cc.
Water, . . .	1000 cc.

This solution can be kept for a long time in darkness. For use I take 1 volume of this to 9 volumes of water. When a fixed and washed collodion negative is immersed in this solution it will be seen to be reduced, but in the opposite way to that in which the action takes place with gelatino-bromide negatives. In other words, the half-tones are the first parts to be attacked. One cannot think, therefore, of using such a plan in order to render too vigorous negatives less harsh. On the other hand, the plan answers very well for clearing fogged negatives.

This is precisely what is wanted in a reducer to be used in the case of negatives taken through a screen for process work. I have adopted this plan with a great many of my own negatives made for half-tone process with collodion, and I have found that the solution of permanganate acts in a better manner than that of potassium ferricyanide and sodium hyposulphite usually used.

It clears the screen negatives very quickly, and leaves the dots very sharp and well defined, as is necessary when good copper or zinc plates are to be etched from them. After the permanganate solution has been used it should be thrown away, as it must not be used a second time. This matters little, as its cost is almost nothing. With collodion negatives one never gets the brown stains of manganese binoxide, so that the treatment with oxalic acid is not necessary. This is due to the fact that the collodion, unlike the gelatine, does not exercise any considerable reducing action on the potassium permanganate.

I think that it may be to this difference of action of the medium in which the silver is held, and to the different disposition of the silver forming the image in the two films respectively, that we have to look for the cause of the different action of the permanganate in the two cases. In a gelatino-bromide negative the silver is distributed throughout the film, whereas in a collodion negative it lies mainly, if not entirely, on the surface.

Acidified permanganate solution can also be employed as a reducer upon negatives, whether on gelatine or collodion, which have been intensified with mercuric chloride. According to the nature of the solution employed in the intensification process to blacken the bleached negative, the extent of reducing action of the permanganate depends.

The method of obtaining positives direct by means of the permanganate solution and sulphuric acid was dealt with in my previous paper. Experiments have been continued with a view to making the process more perfect and more certain. I can now obtain positives direct, or reproduce negatives direct from negatives, very rapidly and without any failures. I can recommend it to any carbon worker or collotyper who may want to make reversed negatives, as a rapid and easy method of doing so. Negatives can be copied in this way which, except as regards their reversal, cannot be distinguished from the originals.

The method I usually adopt now is as follows: After giving under the negative an ample exposure to the plate which should be as evenly coated as possible, I develop it in a bath of glycin, which I have found is the most suitable developer for carrying the image to the depth which is necessary in this case. The developer is of the following composition:

Sodium Sulphite (crystallized), . . .	30 grammes.
Potassium Carbonate. .	50 "
Glycin, ...	10 "
Potassium Bromide, .	1 gramme.
Water, ...	1000 cc.

The plate is left in this solution until the image has developed to such an extent that those parts which correspond with the most transparent parts of the negative have developed right through to the back. This is seen by examining the negative from the glass side. In order to effect this the plate must be left in the solution for at least half an hour; if it gets a little foggy it does not matter at all. The negative is then rinsed in water, and, instead of fixing it, it is immersed in the acidified solution of permanganate.

For this purpose the following bath acts very quickly, and, during the short time that it is necessary for the plate to be in it, does not attack the gelatine:

Potassium Permanganate,	2 grammes.
Commercial Sulphuric Acid,	20 cc.
Water, ...	1000 cc.

The silver forming the image will be found to dissolve very quickly, and when the whole of the black image has disappeared the plate may be taken out. If it is examined by transmitted light it will be found to bear a negative image formed by the non-reduced silver bromide. This operation is done in the light.

The plate, however, will be found to possess a strongly marked brown color, due to the manganese binoxide from the permanganate; this should be removed by immersing it in a 1 per cent. solution of oxalic acid. The negative image will then be seen much more clearly.

After washing the plate to get rid of the oxalic acid it has to be developed a second time in order to blacken the silver bromide, which now forms the negative image. This second development is not so easy as it might seem, since the silver bromide, after the treatment it has gone through, does not readily lend itself to reduction.

The developer which has answered best in my hands for this second development is a solution of metol containing sulphite and a caustic alkali:

Metol, ...	10 grammes.
Sodium Sulphite (crystallized), . . .	40 "
Caustic Soda, . . .	5 "
Water, ...	1000 cc.

If the dish holding the plate is held in a bright light development will take place very rapidly. It only remains to wash the reversed negative so obtained for a short time, for in this case there ought to be no need to immerse it in hypo. It may then be dried.

If it is found to be too vigorous it may be reduced by being treated with a very weak solution of acidified permanganate. The result depends entirely upon the first development, which ought to be pushed as far as possible without troubling about fog, for this fog, as will be readily understood, does not remain in the finished reversed negative.

If the gelatine film of the plate does not seem hard enough, and shows a tendency to come off the glass, or to give blisters when in the solution of permanganate, it can be prevented by the addition of a little alum to the solution. There seems nothing further to add or other difficulty likely to be encountered when plates of a good quality are employed.

As far as the other applications of permanganate are concerned, the experience I have had up to the present is hardly sufficient to enable me to speak definitely. I may refer to some, incidentally, however. For example, in the case of a solution of permanganate acidified with acetic acid of a similar strength to the other, it will be found that it does not act as a reducer; but that, after the plate has been left in it for a sufficiently long time, and has been treated subsequently with oxalic acid to get rid of the brown stain, the silver image on examination will be found to have taken a whitish color similar to that possessed by collodion negatives. This image, however, does not act as if it were composed of one of the ordinary silver salts, for it is not attacked by hyposulphite.

If a very dilute solution of the permanganate acidified with acetic acid is employed it produces a very even yellow color, which is strongest where there is no image. Negatives that are too hard can thus be softened, and unused plates, after being fixed and washed, can be converted into yellow screens. This acetic solution of permanganate is a perfect eliminator of hypo, with this difference from others, that it has no reducing action on the image; but it is necessary after using it to clear the negative with oxalic acid.

The solution of permanganate acidified with sulphuric acid, such as has been already referred to as a reducer for gelatino-bromide negatives, absolutely destroys the latent image. An exposed or fogged plate so treated, and given a bath of oxalic acid, and washed and dried, will not be found to possess anything like as great a sensitiveness as it had originally; but if it is subsequently given a bath in a very weak solution of ammonia, the greater part of its primary sensitiveness will be restored. This method, it is possible, may be of use in restoring fogged plates.—*Photography.*

GUM-BICHROMATE HINTS.

In a contribution to *Photographische Rundschau*, quoted by *The Amateur Photographer*, Dr. Hauberrisser gives some practical notes on gum-bichromate. In measuring out equal volumes of the gum solution and bichromate solution, the author does not use an ordinary graduated measure, but a glass of convenient size; a gauge-mark being made on the neck by means of a file. As regards the gum this method of measuring has the advantage that the neck of the bottle need not be soiled. The gum being measured out, the pigment is worked into the gum, and after the pipette has been rinsed, it is used to measure the bichromate solution. If a well-sized drawing paper is employed there is no need of a substratum. A chief difficulty among gum-bichromate workers has been the tendency of the paper to stretch when repeatedly sensitized, printed and developed; indeed, but few samples of paper will satisfactorily stand multiple printing without some permanent expansion, and a very slight expansion serves to put the margins out of register, even if various printings are made to correspond exactly as regards the central parts. To prevent the stretching of the paper, Herr Hauberrisser mounts it on glass in the following manner: A sheet of gutta-percha tissue is laid on a glass plate, and on the tissue the paper is laid, when all can be fixed by the careful use of a hot laundry iron. The paper is now coated with the sensitive mixture, a good general rule being that the coating must be so thin as to allow a fine pencil mark, previously made on the margin of the sheet, to be distinctly seen, but the sensitized paper should never be kept more than one day. Mounting of the paper on the glass plate is an advantage in printing, as two strips of glass may be cemented to the same plate at right angles to each other, and in such a position as to serve as a registering corner or stop for the negative. Under these circumstances a printing frame is not required, the negative and glass plates being held together by clips. Exposure must not be too prolonged; indeed, the outlines of the subject should be scarcely recognizable, a test exposure on a small piece of similar paper (which need not be mounted) being recommended. Development is best performed by supporting the plate, face downward, in a dish of cold water; three or four hours being ordinarily required. If the exposure is correct the print will now show delicate details everywhere except in the high lights, which will be bare. The plate is lifted carefully out of the developing dish, and is set up to dry without any rinsing or washing. The first impression, when dry, is often better for a sizing with a warm 2 or 3 per cent. solution of gelatine, but care must be taken not to disturb or dissolve the delicate image. A wash with a 4 per cent. formalin solution serves to harden the gelatine film, and when the plate is once more dry all is ready for the second sensitive coating; the mixture for this being made up with less pigment (about half) than the first, but the exposure should be about the same as in the first instance; in this way the gradations are obtained in the high lights. The above indications will be a sufficient guide to action when three or four coatings and printings are required, and the finished print can be removed from the glass plate by heating the whole in an oven, when the paper can be peeled off without any great difficulty.

NOTES ON COLD-SODIUM CHLORIDE.[1]

BY LYMAN F. KEBLER.

If any one will take the trouble to obtain quotations from the various manufacturers, or consult their price lists, it will become apparent at once that there must be either a considerable margin of profit for some, or that the gold-sodium chloride varies much in composition. The differences in price or information on the labels are such, however, that the various makes come into direct competition with one

[1] Read at the meeting of the Photographic Section of the Franklin Institute.

another. For example, 1 ounce of gold sodium chloride, U. S. P., in ⅛ ounce vials, is quoted by several makers (wholesale price list) at $5.90, $6.10, $7.50, $9.60 and $14.50 respectively. Again, some makes, without any specifications as to quality, are generally quoted a few cents below those containing information as to quality.

It must be remembered that the 1890 Pharmacopœia requires this article to contain 30 per cent. of metallic gold, and a commercial article may contain less for photographic purposes, but the latter should be so labelled as not to be brought into direct competition with the more costly article. If a certain article is prepared for photographic purposes or for some other purpose, let it be so labelled as not to be misleading.

In order to get positive information about this article the writer secured a number of samples, and a careful examination of the same gave the following results:

In this mixture dissolve 2 grains of pure oxalic acid, then place the whole on a steam bath for two hours, or until all the gold is reduced to the metallic state. Decant the clear liquid as closely as possible, wash the gold with distilled water, dry, ignite and weigh. This method works well, but the volumetric process for this purpose appeared to be valueless.

From a careful perusal of the data contained in the foregoing table, it can readily be seen that all the samples were of good quality, but there is a wide variation in the percentage content of gold.

In order to fully comprehend the actual difference in money value existing between the various samples, it is only necessary to compare the figures below:

No.	100 Ounces Gold-Sodium Chloride Contained Pure Gold.	Cost at $21 Per Ounce.
1	21.29	$447 09
2	26.13	548 73
3	24.68	518 28
4	32.91	691 11
5	29.02	609 42

ANALYTICAL DATA OF GOLD-SODIUM CHLORIDE.

No.	Condition.	Reaction to ammonia on glass rod.	Reaction to litmus.	Weight in grains in 15-gr. vial.	Solution containing 15 gr. in 100 c.c. dist. water.	Marks on labels.	Actual per ct. of metallic gold gravim.	Per ct. of gold based on 15 grs. gravim.
1	Quite moist.	None.	Acid.	13.55	Slightly opalescent.	15 grains.	23.55	21.29
2	Dry.	"	"	14.42	Clear.	15 "	27.22	26.13
3	Dry.	"	"	14.86	Slightly opalescent.	15 "	25.00	24.68
4	Dry.	"	"	17.53	Clear.	15 " U. S. P.	28.31	32.91
5	Slightly moist.	"	"	14.45	Clear.	15 " U. S. P.	30.30	29.02

The amount of material contained in each vial was estimated by removing the stopple, determining the gross weight, then carefully removing the chemical by means of water, drying the vial and obtaining its weight. From these weights the amounts of gold-sodium chloride in each vial can readily be calculated, and if there should be an error in any direction it is quite likely to be in favor of the chemical.

The metallic gold was estimated as follows: Transfer the contents of a vial into a 250 cubic centimetre evaporating dish; by means of 100 cubic centimetres of a 1 per cent. solution of pure sulphuric acid.

The greatest difference, based on the cost of the gold only, amounts to $244.02, or by eliminating the highest, which appears to be somewhat abnormal, the difference becomes $162.33. In other words, the purchaser of 100 ounces of the article containing the smallest per cent. of gold is paying $162.33 for something he is not getting. In this case, as in many others, the cheapest is the most costly.

THE editor of the *British Journal of Photography* estimates the number of professional photographers in Great Britain as somewhere near 5000.

THE OHIO-MICHIGAN CONVENTION.[1]

THE first annual convention of the Ohio-Michigan Photographers' Association met at Put-in-Bay, Ohio, August 21st. From the interesting report sent us by Secretary Bowersox, of Dayton, the affair seems to have been at once practical and enjoyable. Fully one hundred and fifty members were present, representing the best galleries in the two States, and among the visitors were Mr. E. B. Core, of New York, President-elect of the National Association, Messrs. Griffiths, Paulus, and Jex Bardwell, of Detroit, and Mr. Hall, of the University of Michigan.

President C. M. Hayes, of Detroit, opened the convention with an address chiefly devoted to the aims of State associations. He also urged those present to become skilful in good technical work rather than to pervert their art by attempting to carry an exaggerated ideality, or "art effects" which they did not understand, into their portrait work. Fidelity of likeness, the presentation of the best points of the subject, and attractive photographic quality were, he considered, the things most worthy of attention in the pursuit of portraiture as a profession.

Mr. Paulus, of Detroit, followed with a helpful "talk" about "Lighting and the Hands in Portraiture," which we reprint in part on another page.

A demonstration of the Schanz Acetylene Lamp for portraiture, given at the evening session, ended the first day's meeting. It was altogether successful, photographs being made—exposed, developed, printed and mounted in less than ten minutes. The lamp showed wonderful possibilities in the hands of its capable operator, and this demonstration awakened much interest.

The second day's session was opened by an address by Mr. E. B. Core, of New York, of which, unfortunately, only a brief account is available. Mr. Core advocated the removal of all things from the studio which had no place or meaning in the work being done there; the advantage of giving the patrons of the studio what they themselves want or desire rather than forcing upon them something which is new to them. In photographing children, said Mr. Core, I make it a point to get well acquainted with my little subjects, to be interested in their dolls and playthings, and to make them feel that their dollies, their kittens, and other pets are the very finest that ever happened. In this way the photographer gains the complete confidence of his visitors, and they feel so thoroughly at home that they desire to come again.

At the afternoon session Mr. Keenan, of Detroit, lectured on X-ray photography, being followed by Mr. Clark, who gave some interesting experiences in the development of X-ray negatives. A lecture on astronomical photography was afterward given by Prof. Hall, of the University of Michigan, with Jex Bardwell at the lantern. This proved a novelty to the photographers present, and was warmly appreciated.

In the evening Jex Bardwell gave the lantern show reported by Mr. Ryder in our last issue. At the close a special collection was made to reimburse Mr. Bardwell for his trouble, and we note with pleasure that the veteran received a substantial sum for his lecture.

The third day's meeting opened in a lively way with the election of officers for the ensuing year. This resulted as follows: *President*—C. S. Bateham, Norwalk, O.; *Vice-President for Ohio*—A. L. Bowersox, Dayton; *Vice-President for Michigan*—J. F. Rentschler, Ann Arbor; *Secretary*—Frank Clark, Detroit; *Treasurer*—W. L. Smith. It was wisely decided not to hold a separate convention in 1901, but to unite in the convention of the National Association at Detroit. Mr. E. B. Core expressed his appreciation of this decision and promised all a hearty welcome and a good time.

A formal resolution was then put by Mr. George B. Sperry, and seconded, that the Association should meet again in 1902, time and place to be left to the Executive Committee.

The following list of awards was then read by the Secretary:

Pictures selected for the Salon, from A. L. Bowersox, C. M. Hayes, George M. Edmondson, D. D. Spellman, H. W. Minns, Baker's Art Gallery, and K. G. Goddard. One picture was selected for

[1] From a special report by Mr. A. L. Bowersox.

the *Interstate Exhibit.* This was a panel picture from the exhibit of Mr. George M. Edmondson.

Grand Portrait Class. 1st, Baker's Art Gallery, Columbus, O.; 2d, Lane & Co., Columbus, O.

Weed Trophy. C. M. Hayes & Co., Detroit, Mich.

Miniature Class. 1st, F. R. Bill, Cleveland, O.; 2d, S. Sharpsteen, Grand Rapids, Mich.

Bust Portrait Class. No awards for lack of competition.

Figure Portrait Class. 1st, C.W.Scheide, Elyria, Ohio; 2d, S. Sharpsteen, Grand Rapids, Mich.; 3d, J. A. Walker, Bowling Green, O.

Cabinet Class. 1st, Beckman, Bros., Saginaw, Mich.; 2d, T. Zweifel, Dayton, O.

Rating Class. M. E. Bunty, Montpelier, O.; J. H. Tobias, Galion, O.; B. F. Reichard, C. Burr Frank, Galion, O.

Special Class. 1st ($50 in gold), Moore & Stephenson, Atlanta, Ga.; 2d (gold medal), George H. Van Norman, Springfield, Mass.; 3d (silver medal), J. E. Griffin, Wheeling, W. Va.

The "Special Prize" pictures were a remarkably good lot and well worth a trip to Ohio to see. An exhibit was sent from Germany, but did not arrive. Another exhibit was sent from Glasgow, Scotland, but was so inferior in workmanship that it had no chance in securing an award. The portraits in this exhibit lacked roundness, expression and artistic finish.

After the awarding of the prizes, Mr. L. A. Dozer, of Bucyrus, was given charge of the Salon pictures; Mr. Griffiths gave an address on "Backgrounds, Their Use and Abuse," and a few words from the President closed the convention.

Address of Mr. Griffith.

Mr. A. H. Griffiths gave a talk about things in general. Among other things he said: I have been asked to talk to you about "Accessories and Backgrounds."

Hamlet said to the players, "Speak the speech as I spoke it to you, trippingly on the tongue; give to it that expression and emphasis which will make it plain to the people. If you mouth it I would as soon the town-crier spoke my lines. Suit the action to the word and the word to the action. Tell your story simply, trillingly, earnestly, so that it is plain in every way."

This applies to the photographer, to the painter, and all makers of pictures. You must have background, you do not want to put people into space. You must have air, atmosphere, and must have surroundings in keeping with the character of the person you represent. . . . Make your background simple. The simple thing is the thing that will wear best, and out of which you will get the most in the end.

It is the same with your accessories, with all your draperies and other studio material; with all the furnishings which you have about you to help you in your business. Do not crowd the studio with a conglomeration of beautiful chairs, magnificent tables, and other things which have no place in nine-tenths of the portraits you will make. When you see these things staring at you in a picture they weary you. Do not buy a single accessory unless you are really in love with it. Now and again I go into a house in which everything seems to have been bought ready made, without any thought as to its fitness. There is not a particle of life or of simplicity or of human nature in that house. It is like the sample furnishing room in a furniture store. I go into another house, and I see here and there little objects, not of great value, but bespeaking human sympathy and tasteful choice, reflecting the individuals who live in that house. Such houses are interesting, and form a true environment for those who live in them. Photographers are making pictures to bring them money. This is right. We can none of us live without money; it is a perpetual grind to make money and not to allow it to get away from you after you have made it. But let me persuade you to put a little more heart into your work as well as the commercial instinct. Make pictures that people will take home and delight to have in their rooms because of their love for them.

Study your accessories and backgrounds as you study people. You can read your people, and with care choose those things which are adapted to them. The faculty of close observation is one of the most precious faculties which the photographer can possess. Some people are born without this faculty, but it may be cultivated.

A boy was taken to a window and asked to describe the articles in that window after he was blindfolded. At first he could only remember six or seven of the articles that were in the window, but within a month he had a list of 182 articles which his memory recalled as having been in that same window. The great trouble with photographers is that they are blind, they go about with their eyes shut. Something or other comes along and opens their eyes. Instantly everything takes on a new significance, and they see things and appreciate things of the existence of which they were previously unaware.

Take the question of subjects alone. There are just as good subjects in any town in the United States as a man can desire. Look around and see the wonderful children, the fine examples of manhood and those marvellously beautiful women which we have, even in our smallest towns. So often a photographer will come to me and say: "I cannot see any subjects in my town. If I were in New York or Philadelphia or Detroit I would have fine subjects." Why, the photographers who live in the little towns and villages have really better and greater opportunities of making grand work than those in the great cities. It is a poor excuse that you who have so much time in your studios should allow some fellow in a city studio, crowded with work, to go in ahead, and content yourself with the excuse, "well, he is in a big city and has the subjects."

You must educate yourself to see, and then, when you see your subjects, make your pictures of them simple. I am inclined to repeat the word simplicity to you again and again. It is the first and last step in picture-making. You must have courage to throw away everything that you do not need, keeping your backgrounds altogether out of sight, unless you see that they will really help you in the presentation of your subject. Learn first to see and to secure the possibilities of your model, and then you will gradually commence to make pictures. If you look at the collection we have here to-day and compare it in your mind's eye with the collection which you saw four years ago, you will acknowledge that it is infinitely superior. You will see that there is simply no comparison. This is because you have been educating yourself. You have been educated without knowing it, so that now you have learned sufficient to enable you to judge between this work and that. You have cultivated the faculty of self-criticism.

SPOILED PAPER.

THERE is a letter lying on our desk—four closely written pages—from a man who wants us to interview a New York dealer —"with a club." The case in dispute is of a class as old as photography, for the dealer has supplied fifty dollars' worth of paper, and the man says it is "N. G." The dealer says the paper was delivered in good condition, the man says it was not; and as he has paid for the paper he appeals to his editor. This is a pure business quarrel, and it is one which, fortunately is very rare. Photographic materials are such a curious mixture. In some ways the severest things wont injure them. In others they spoil with most exasperating ease. In the present case we took up the matter, not with the dealer but with the photographer. That is, we asked him a few questions, and he replied with six pages. These did not tell us much that helped, but one little hint set us on the right track; and a third letter, just to hand, places the responsibility where it should be—that is, with the photographer. He has quite a large store-closet, and has always lit it with an oil lamp. A few months ago he put in a gas light instead; and that did the mischief. They have struck natural gas in his section; and where they strike gas they do not sell it at so much a foot, but they charge so much a month, burn much or little. The result is that in natural gas sections the gas burns day and night because the folks don't bother to turn it off; and our friend caught the bad habit. Now if a gas jet is left flaring all day in a large closet, without ventilation, it is enough to hopelessly ruin either paper or plates.

The storage of plates or paper is worth a moment's consideration. The best storage is perhaps, not to store at all, that is to buy frequently, and buy fresh. But

fortunately the manufacturers alike of papers and plates are so careful that they may usually be excused if they think any fault is with the consumer rather than with themselves.

Little is left for the photographer beyond the exercise of a very moderate amount of care Do not put stock on the highest shelf in a poorly ventilated and heated room. Keep the package cool and dry, and stand on edge on a shelf. There should be no such thing as "spoils" if a current of dry air has access to the goods stored. This is a simple remedy, but efficacious, and within the capacity of the smallest gallery.

OUT-OF-WORK

BY PAUL CLARE.

I FEEL very much inclined to entitle this article with an even briefer and much more emphatic word; but must not do so, as "swear words" should be used sparingly.

This article is not photographic, though it is prompted by a photographer—one who is out of work.

Three months ago a photographer's assistant (as I suppose I must call him) came to my office. I had met him once when calling on his employer, and we had exchanged a few words. This was his excuse for calling on me, and I do not blame him for it, for when you need help or can make use of people in any way it is not always wise to be too diffident (but do not be a bore).

This young man came with a long story that he would shortly be out of work. He wished to give me a full biography of his employer, but I cut that short, and learned that what he wanted was assistance in finding a new berth. Now, here is a secret for the man out of work: Use the assistance of your friends all you can, but remember that you are yourself the one most to be depended on. If not, there is a screw loose somewhere.

The time came, and this man was out of work. He said his late employer was a beast, but that did not better his chances of finding a new one. He came to me with a long story (nearly four hundred years old in America, and thousands of years old in Asia) that things never were so quiet and that he did not know what the world was coming to. I told him to visit every studio in Fifth avenue (I hope my friends there will forgive me), and then to try every studio in Sixth and Third avenues, and then every studio in New York. He thought it was hard, but I pointed out that being out of work was also hard, and he thought me very unkind. Since then he called once in desperate need of five dollars, and went away with a strong bellef that I was one of those friends who desert people in a time of trouble.

I have no doubt that many thousands of people believe that many thousands of other people are hard-hearted wretches, who forget their early days and the struggles incident to beginning in life. Usually the belief is more or less rubbish, and should be dismissed for something more practical. Being out of work is a fact as hard as it common; and the sooner the man who is out of a berth gets down to the fact the better it will be for him. To howl about luck and to wait for something to turn up are equally foolish. The advice to visit every studio in New York may be unpalatable, but if the man cannot find any better or more practical scheme, let him take the advice. But it is pretty tough on a man to tramp for ten hours a day and meet nothing but rebuffs. Granted; but it is work not as hard as thousands of people tackle every day, and it is work which may at any moment bring the result. And the result is the one thing vital, and it must be obtained at whatever cost.

It is little use for the out-of-work man to imagine that his locality is not healthy and that he would rather be at the seashore, or in the city, or in the country, or down east, or out west. If he backs up his imaginings by action and goes there, all right; but if he hangs on at home, the sooner he changes dreaming for hustling, the better for all concered.

It may seem unkind to the out-of-work man, but often (not always) a man who is long out of work more or less deserves it. And so generally is this understood that if

a man applies for work and says he has been hunting it for six months, his possible employer immediately imagines that there is some reason. The longer a man has been out of work the stronger is this feeling, and the moral is obvious: The man out of work must hustle around, not next week, or to-morrow, but right *now*.

THE PHOTOGRAPHER'S WINDOW.

How is it that we are so fond of looking into the photographer's window, asks "Outsider" in *The Amateur Photographer* (London). Possibly at the bottom there may be some deep-lying, determining cause asserting itself, and making us linger, in spite of the claims of business or day's work in general, of the same type as the curiosity which will induce a monkey to give up anything he may be doing, or undoing, for the pleasure of looking at his reflection in a mirror. Or if there be anyone whose self-respect will not allow of going so far back for instincts as his distant progenitor, the anthropoid ape, there is the child to see an unruffled reflection of himself in. The natural doings of children surely touch the animal foundations of men, and it is patent enough that children are fonder of looking at pictures, and from an earlier age, than anything else. Besides this, which must be regarded almost in the light of an instinct, to the action of which we can hardly be held conscious, there is the universal interest taken in all with a human touch about it. The photographs are those of men and women, and in a subconscious fashion we acknowledge the attraction by stopping to look. Were they landscape or architectural subjects, not one in ten of those who now stand to gaze would do so. More active remaining reasons for the interest might probably be found in the off-chance of seeing the picture of some one we know, and the gratification of a pleasant Pharisaic feeling that we are certainly better looking than the majority of those pictured. Some one inclined to dispute the foregoing may contend that it is a feeling for the artistic that determines the stopping to look. But apart from the fact that an appreciative feeling for the artistic is not natural, nor generally diffused, but one that comes from cultivation and culture generally, the samples offered for exhibition are anything but artistic; on the other hand, very much the reverse. Surely these men and women attitudinizing with such a marked air of constraint, in their Sunday clothes and Sunday looks, cannot by the aid of however kindly a charity be called artistic! Look at the elderly clergyman, for instance, sitting in the antique chair, trying to appear at his ease and to throw an intellectual look into his face while reading the evident album on the small table—also antique—at his side! Can he be said to look himself and his appropriate part! We trust not, for the sake of his years and the dignity of the cloth. Or the gay-looking young man, more up to date in the way of collar, cuffs, and clothes, next to him? He has unfortunately elected to be pictured smiling. If not already sorry for it, he will be in years to come, if fool enough to keep the photograph so long. So will most of the women for theirs, for, apart from the simpers, wooden smiles, and airs of duchess dignity chronicled, that will not charitably fade as the originals did, the style of doing up the hair and the fashion of the dress will have altered, and "better be dead than out of fashion." How dowdyish to the "mere male" eye is the female photograph ten years old? How very much more so must it be to the female one! Whose fault is it? Partly the photographer's, partly the photographee's. In the matter of dress, for instance, granted that the photographer had the capacity for draping his figures in the softer, simpler folds that, as such, have been artistic since the first fig leaf costume, and will remain so throughout time until we come to the simplicity and perfection of angelic dress, how many of his clients would lend themselves to the arrangement? Very few.

But beyond the question of dress, the photographic process is one that does not by any means make for artistic righteousness. Photographers, as a rule, pay more attention to the technical than the artistic side, and hold in an over-tenacious way to older rules and traditions of their trade, in the arranging of the sitter and his ac-

cessories, the light falling upon him, and so on. When upon higher planes we come across men possessing appreciation of artistic arrangement, natural pose, and everyday lighting, it is only to find that they are sadly hedged in by the rigid, mechanical nature of their tools, and, paradoxical though it may seem, the over-perfection of those tools within their limits. An occasional individual, intent upon a free and unconstrained position, throwing himself at his ease into a studio chair, will demand to be thus taken. If, in spite of advice, he insist upon having his way, the result will certainly not be the one he expects, in the elephantine disproportion of feet and legs to the rest of his body, from their being so much nearer the lens. That all may be in true proportion he has to be squeezed, as it were, into one plane. But who ever arranged himself when at his ease with an eye to being flattened into a scientific plane! And if, on the other hand, not at his ease, how can he appear natural in the photograph? This is one difficulty. Another is the extreme fidelity with which the lens will reproduce the minutest detail, and an impartiality that does not differentiate in the slightest between, say, an important wrinkle at the corner of the eye and the unimportant pattern of a tie or scrap of lace frilling. The artist in his work exercises a rigid selection, and whilst careful in putting in the details that indicate character, is just as careful in keeping out those of no consequence which may detract from the effect of the others. The artist's result is the less true, but it pleases the more in that it is the impression upon canvas or paper of what a human eye sees, and not what the more perfect, mechanical one of the camera does. It is the warring between the accustomed though imperfect action of the one, and the scientific perfect one of the other that must ever tend to give the photographic print an air of unreality. Looking at a pretty woman or a noble man, we unconsciously and instinctively concentrate interest and attention upon the face and attitude, and the mental impression formed and stored away does not extend to such secondary matters as cut of collar, fashion of hat, and pattern of clothes; or if it does, it is in a very minor diffused kind of way. Confronted with photographs of the same persons, with immaterial details quite as much to the front—often indeed more so than essential ones—we experience a sense of dissatisfaction, and without exactly knowing why, say, "This does not do justice to him or her." It is a great pity that it should be so, for the photograph, in the ease and cheapness with which it can be produced is a very great blessing, imperfect as it is in the individual, personal sense, however criminal it may be in the impersonal and collective one in the photographer's window and show case.

But the photographic "art" is young, and undoubtedly improving. The amateur, with less skill, but a truer artistic perception than his professional brother of the all-round proportion of things, has done much to a desirable end; the entry of men with such qualifications into professional ranks must follow in time, and lift them up. These will do away with the rubbishy accessories of the present studio, and the disconcerting, overwhelming glassy character of the studio itself, to the gain of natural and accustomed surroundings as something to help in the assuming of a natural pose. The special demands of the camera being held in mind, and matters subordinated to them, dress will be simplified, and the necessary one plane gained, not so much by showing, as now, as much as possible of the subject's front, but in catching the suggestiveness of a natural pose and action.

Probably the most natural photographs of all would be ones taken in home surroundings, and the future photographer may elect to take them there.

THE tendency of uranium-toned platinotypes to fading is a sore subject with those photographers who devote their time and skill toward the attaining of unusual or double tones. Much of the most beautiful work is very fugitive, and though several workers attain a greater or less degree of stability in their prints, none of them feels quite safe. E. Cecil Hertslet, a well-known exhibitor in Europe, suggests that atmosphere rather than light is the cause of the trouble, and that if pictures are closely framed, behind glass, their life is much lengthened.

THE MIDDLE COURSE.

BY HENRY JOHNSON.

THERE is nothing new under the sun, not even a dollar camera. In the earlier years of the dry-plate a genius arose and invented a dollar camera which took all pictures by the instantaneous process, and was particularly adapted to working in gaslight. Its chief mission, however, was to catch "suckers," and in this it was eminently successful; and once, I believe, one of the cameras caught a picture. But that was by mistake, and the camera, after making many foes, went the way of most fakes.

But we have now a dollar camera and a ten-cent paper film, and a little army of *Brownie* clubbites who cannot afford a dark-room, but who grub along under difficulties, and yet contrive to develop negatives and get good prints.

This myriad army is an interesting problem, as curious in its way as the old question of "what to do with our boys and girls." This new club is creating a new and most hopeful army of button-pressers. Hopeful because the Brownie camera usually means limited means, with little scope for careless snapping, and much need for showing some result for every length of film exposed.

What has to become of these hopefuls? Will they join the great majority of button-pressers who purchase a camera, use it for a season, and then cast it aside for some newer fad; or will they rise to a more expensive camera, and maintain a sober interest in photography, at least as great as that which the pier fisherman bestows on his hobby?

I am sometimes inclined to think that the procedure of photographic dealing in this country is too much directed toward catching new votaries to photography and too little toward retaining those already caught.

There is too great a proportion of the season enthusiast, whose enthusiasm wanes under failure, and too little of the worker who steadily improves.

One solution of the difficulty is to direct more attention to the "middle course"—that course between the strained for, conscious "art," and the ignorant stage which has no ambition beyond a snapshot which is a recognizable likeness.

The great mass of camerists is composed of people who have neither time nor means to specialize on photography; it must be a mere holiday enjoyment to them. If they aspire at all, it must be to the exhibition of a local club, for the walls of a salon are above them. Let them by all means stick to their own lines—the portraits of friends in the garden, or the views taken during the summer holiday. And let their advancement along the lines of straight photography be in the direction of a little judicious selection, a little care of the elementary rules of composition.

Much pleasing and creditable work is done by people who have no conscious knowledge of art, and no aspirations after the title of artist; and if the artists are the glory of photography, the careful plodders are at least the backbone.

Music is a living art, not because a great musician can attract ten thousand people, but because music is heard in a million homes. It may be nothing more than the accordion of the farmer's girl, with her brother's kettle-drum as an accompaniment, but it is a big factor in national patriotism. Without this widespread foundation neither the great musician nor his ten thousand audience could be.

Why not let the worker go along his narrow lines? Because it is only by making the camera a vehicle of a little intelligent thought that interest can be maintained in it.

He has photographed the children as they have stood before the camera; let him try to get them in the naturalness of their play. He photographed the little church of the village where he spent his holiday, and he photographed the summer hotel. Has he got something in the picture of the former which suggests rest and quietness? Has he something in the latter which suggests relaxation and fun?

If he has got his picture, can he find the picture in it? Does he know how to *trim?* and how to mount?

Much helpful teaching can be suggested to the man whose camera is but a hobby, and it is only by development along such lines that the average worker can keep and increase his interest in the art.

FILMS.

THE question of films is one which has much agitated our British brethren of late. The question of some support other than glass has exercised many able minds, and some very alluring articles have been placed on the market, sometimes with doubtful results.

The most promising of all these new films was, at first glance, a stripping film termed "Secco." Secco is certainly a most bewitching novelty at first glance, and the descriptions of it given in the English press were very eulogistic.

Secco is apparently a gelatine emulsion, coated on a thin paper support. The stripped negatives possess perfect flexibility, they do not stretch in the manipulations of development or subsequently, and the vehicle has no collodion in it. Nothing finer in the way of sharp, crisp, non-granular images could be desired. Moreover, it was shown that the Secco film obviates halation in a very marked degree. Secco film, judging by results, is all that can be expected of it.

But what of the stripping process, and how is it likely to behave in the hands of photographers, amateur or professional? The process is simplicity itself. The developed, fixed and washed paper negative is squeegeed film side down on to what may be conveniently termed a temporary paper support, also coated with gelatine. Thus your image is now backed up on each surface with a film of gelatine and paper. When the negative is dried, or before if necessary, the corners of the paper supports are gently turned back, and with the slightest possible pressure and all the ease in the world, the paper sheets strip off the gelatine, and there is your negative complete, to be handled in precisely the same way as one on celluloid. Nothing could be simpler, or, apparently more certain than the working of Secco films, which, finally, do not curl in the solutions, and all through the manipulations behaved in a manner which was above reproach.

At first blush Secco appeared an epoch-making novelty, and wonderful and mysterious stories were told of firms who confidently expected to control the selling in this country. In our hands Secco proved simple and satisfactory in manipulation. The stripping worked like a charm, and the resulting film negative was light, tough and non-curling. But we could not see how to put a Secco film in our plate-holder without it buckling or bending. And apparently the great bulk of camera users have got down to the belief that their success does not depend on the use of Secco, and they stick to their old notions. It may be that Secco will shortly break out into a greater boom, but present tendency seems to be to lay low.

The Wellington film, put on the market by Wellington & Ward, has achieved an instantaneous success, thanks first to a good article, and second to live business management. The makers of this film spent money in advertising in a lavish but careful way, to an extent that would astonish the average American manufacturer, who sighs as he thinks of publicity as a necessary evil. The film is of pure gelatine and is backed by a practically grainless paper. The advantages claimed for the new film included keeping qualities equal to glass plates. The emulsion is sufficiently rapid to admit of the use of hand cameras, and even of instantaneous shutters, but quality of emulsion has been considered as more essential than extreme rapidity. For delicacy of gradation and fineness of grain the films compare favorably with a slow plate rich in silver. Of course the films can be printed from either side, a power of much use in carbon work and to photo-mechanical workers, as doing away with double transfers and reversals. Halation is a thing of the past with them, and the rather curious claim is made that the speed of the film is much higher on account of the paper support, which appears to absorb the light or keep it in the film. The film is sufficiently rapid for hand camera and "instantaneous" work. Any developer may be used. After development the film is well washed, and immersed for ten or more minutes in common alum, 2 ounces; water, 40 ounces. It is again washed, fixed in an acid or ordinary hypo bath, and finally washed for an hour. The negative is then squeegeed to a ferrotype plate, and dried in a cool place. The negative will be found

to detach itself when dry. It is quite possible for the negative to be used for printing on its paper support if so desired; but, if a transparent negative is required, the film must be stripped from the paper. Before this can be done the whole thing must be quite dry. A cut is made through the gelatine at one edge, and the same lifted up, the knife being passed round the edges of the negative. The two gelatine films may then be removed in close contact from the paper.

The latest claimant to public favor is the Thornton film. This, like the Wellington, is on a gelatine base, and like it too, is in the hands of a really live firm. Mr. Thornton, whose name is given to the film, is well known in connection with the "Thornton Pickard" shutter, which has attained a world-wide and deserved success. The films will be supplied either in cut sizes, flat, or spools for cartridge cameras.

For the American worker the Eastman film is at once the best and most convenient, as far as cartridge or roller film cameras are concerned. This was the first roller film on the market, and it holds a position from which it will not easily be displaced. For the user of flat films in cut sizes the Seed and Carbutt films have, for many years, given abundant satisfaction, and are as reliable and as easily manipulated as glass plates.

PHOTOGRAPHING MACHINERY.

THE engineer is in the aggregate a large user of photographs; he would use more if he were able to get them.

The photographer of machinery must be one of those men who are not afraid of difficulties; he must, indeed, hustle to find difficulties and then to overcome them. The man who does this will be busy while the other man sits idle in his gallery, waiting for the "usual thing" to come along. It is a strange and not very comforting fact that many specialist photographers are drawn from amateur ranks, men who are making a living in other lines and who are attracted by the better money in photography. Within the past six months we have met as many men, all of whom have joined the ranks within the last three years, and all of whom are making big money. The last man we met went into photography on a guarantee from a buggy factory. The makers wanted photographs of their buggy, and every photographer in the county gave them what *he* was satisfied with. At last in despair they turned to a bright young man in the town who was earning twelve dollars a week as a druggist's clerk, and he gave them what *they* wanted.

They offered if he would do all their work to guarantee him at least one thousand dollars worth per year, and now at the end of three years he has several such customers and is making money hand over fist.

The photographing of machinery has several times been suggested to photographers whose business as portraitists does not keep them more than respectably busy. There is room in the country for a much increased output of technical work.

We had recently a typical instance of the narrow experience of too many photographers. A man whose work—not name, for he is operator only—is known all over the States came to us for assistance. He had to photograph a silver challenge cup, and he wanted to know how to avoid reflections. We gave him half a dozen methods, and he was particularly pleased with two good veterans. One was the suggestion to dab the bright parts of the silver with a bit of putty; the other was to put a lump of ice into the cup and take it into a warm room. This would cause a slight film of moisture to form, and the exposure should be made before the moisture condensed in sufficient quantity to commence trickling down the cup.

The largest accounts are undoubtedly those done with makers of machinery, and a big step to success is in knowing just when to make the photograph. The worst time of all is when the machine is resplendent in its new coat of blue or red, with bright parts of flashing steel. The best time is just after the machine is put together and has received its priming coat. This is usually of a gray color, and photographs well. It may be sufficient at this stage of construction to dull any bright parts with putty. But if there is any considerable amount of bright steel it may

with advantage be dulled by a mixture made by stirring white lead into turpentine to make a thin cream, and then adding about one-fifth its bulk of gold size. The color can be grayed down to any extent by adding lamp-black.

A flat white ground is usually the best for machinery, and this can be best got by blocking out. This entails a considerable labor when small details, such as handles, steam cocks, project from the profile of the machine. Blocking out is done in the usual way, using a "duck" sable hair well charged with opaque color. If electric light is available an incandescent lamp placed beneath the negative is the best illuminant for fine work of this kind; otherwise the usual reflector of the retouching desk.

It is well to avoid handling the film with greasy fingers before blocking out, for the blocking color refuses to "take" easily to the parts affected in this way.

Sometimes the availability of a sheet or canvas, which can be rigged up on a temporary frame as a background, does away with the necessity of blocking out. Should this be creased or marked in any way reproduction of any markings in the negative can be prevented by keeping it gently moving during exposure.

Light troubles us at every point in photographing machinery; we can't "pose" our machine, and must make the best of it as it is. Commonly the fault is too much top light, and this makes heavy shadows, obscuring much detail. Some reflector must be used to lighten these shadows, for in a photograph of machinery detail is essential. Reflectors of white paper may be used for local relief, and often the floor around the machine may be strewn with sawdust or white sand. In some dull lights the assistance of a flash-lamp will be useful.

One part of a machine is always important, and that is the maker's name, with particulars of protecting patents, etc. This is usually cast into the bed or some part of the frame of the machine, and is almost indistinguishable when rubbed over with the priming coat, or indeed at any stage of the work. The letters can be rendered sufficiently prominent by rubbing them with white chalk.

Exposure on machinery must be correct. Every care must be taken that a negative full of detail is obtained. Development scarcely needs a word, but commencement with a weak developer will generally give the best results.

One thing that the photographer will early learn is to have some rough suggestion as to the size of the machine. In a large machine this could best be obtained by letting a workman tend it. He should be working on the machine (though not in front of any part of it) or at least looking at it and not at the camera. In the case of a small machine a two-foot rule, with very strongly marked gradations, should be included.

The man who makes a specialty of photographing machinery will be successful just so far as he can combine a perfect knowledge of the technique of his profession with a strong ability to tackle difficult conditions.

ORTHOCHROMATIC WORK.

Why do not more people use orthochromatic plates; and why do not the users thereof use them with intelligence? The orthochromatic plate is intended to give correct color luminosities; that is, the brightest looking part of any object will be relatively the lightest part in the photograph, whether the object be red or blue. There is at first a strange disbelief in orthochromatic plates, and this gives way to a blind faith which believes that somehow they are better than "uncorrected" plates.

It cannot be expected that every photographer will become an expert on things orthochromatic; but the number of photographers who improve their work by using orthochromatic plates (with discretion) will undoubtedly increase.

One of the greatest stumbling blocks in orthochromatic work is the use of a light filter or color screen. A color screen seems to be an unfortunate necessity, and the absolutely perfect plate which will correctly render all luminosities has not appeared yet. The mistake has occurred in thinking that the screen should invariably be used, and that any old piece of yellow glass will do the work properly. As an

extreme case, take the very yellow light of some sunsets. At such a time there is a sufficient preponderance of yellow rays over the more actinic blue ones, and these latter should not, therefore, be further checked by a yellow screen, or it will be a palpable case of overdoing it.

Writing on the ignorance displayed in the selection of color-screens, James Cadett says:

"Light-filters have been used and put on the market for many years which have been a simple farce so far as correct rendering is concerned. Any piece of yellow glass has been considered good enough by many people, quite oblivious of the fact that *all* luminosities should be correctly rendered. A light-filter, in the orthochromatic sense, is simply a compensator for the imperfection of the plate. Strictly speaking, no light-filter should be required; but, as we must at present have them, clearly they *must be* adjusted to the particular plate used. This means measurement, either by trial and error, or by strict scientific measurement, and the latter is the only way to place light-filters into the condition of respectable commercial position. Had we called 'orthochromatic' photography 'correct luminosity' photography, there would have been some general education in the name. However, on the principle of conservatism, good or bad, we must, I fear, keep up our bad habits. I am anxious to induce as many as possible to take up orthochromatic photography as a matter of sentiment as to what is right; and, moreover, the judges of our various exhibitions have to be taught, for they have been judging blue, violet, and ultra-violet renderings long enough. They will want educating as well us the rest of photographers.

"The exquisite rendering of skies in landscapes, and indeed the whole rendering of the picture by correct luminosities, is such that, excepting for instantaneous work, no photography should be done without plates and filters correctly rendering all luminosities. A few trials on flowers will at once convince the most skeptical.

"It is not wise to at first attempt subjects having a greater range of light and shade than can be rendered on white paper, for, though a greater range than this can be obtained in the negative, the print does not render it. This advice applies particularly in attempting work *against* the light. Carefully selected sunsets do not, however, give this trouble."

The landscape worker, and particularly the amateur, is beginning to be a large user of orthochromatic plates. Especially does this appear to be the case west of the Mississippi. In studio practice they are of little account at present. Although we learn, with pleasure, that the sale of the well-known Cramer *Iso* plates for portraiture has increased very largely during the past year, there can be little doubt but with a corrected knowledge of their advantages and their limitations the use of color sensitive plates must make rapid strides during the coming year.

THE NEW ENGLAND CONVENTION.

THE fourth annual convention of the Photographers' Association of New England was held at Copley Hall, Boston, September 12th to 14th inclusive, under the leadership of President Henry H. Pierce, of Providence, R. I.

It was in every way the strongest convention yet held by the Association. The meetings were attended by from two to three hundred representative photographers from the New England States; the utmost good fellowship was seen everywhere, and the pictorial exhibition brought together as fine a collection of professional work as we have ever seen. Altogether it was evident that the officers of the Association had worked hard for the success of the affair, and we were pleased to see how the fraternity supported them. The influence of such a convention will doubtless be largely felt during the coming year, and those who attended may congratulate themselves upon an opportunity grasped which was well worthy of their appreciation.

In his opening speech at the first session President Pierce said in part:

"One of the most difficult things in all conventions is not only to entertain, but to educate as well. Your committee this year has endeavored to not only place upon the walls that class of work far superior to

anything ever put under one roof before, but to also introduce new features on the practical and business side, whereby the mass of photographers could get a more intelligent idea of how the modern work is being made to-day; also ideas on business methods of noted and successful men that can be brought into every-day use. Here you will find work not only from New England, but from all parts of the country as well, making this New England Convention one of national importance, having a name wide-spreading and a standing to be envied by all State photographic associations in America.

"The principle of a no-prize convention, which originated with us, has proven a great success, and instead of dying out, as was predicted by many, we are that alive that other States are following our example. To-day the photographer, instead of pulling political wires for gold medals, comes to learn, and is willing to exhibit his work in comparison with his neighbor, thus ensuring mutual benefit. There is one little matter I will just touch upon, and that is the practice of holding the prize pictures of past years as a permanent salon. It is hardly fair to ask men from different sections of the country to exhibit work, and then, because the pictures happen to be hung in the salon, to claim them as our property. I believe the pictures should be returned to their owners, and I hope the matter will be finally disposed of.

"I wish to publicly thank all for their hearty support. The Association should be proud to have such an efficient secretary, by whose untiring efforts the financial end of affairs was materially helped. This should in no way detract from the work of the other officers, who have also done much.

"I will not tire you further with any extended remarks, but will simply trust that the efforts put forth by your committee will meet with your approval. Thanking you all for your very hearty support and co-operation, and that you will all feel amply repaid for your time and money expended, I will now close and proceed with the order of business."

Secretary Collings then presented the President with a silver mounted ebony gavel with the inscription, "Presented to Henry H. Pierce by the P. A. of N. E. 1900," in acknowledgment of his untiring energy and work in the Association."

The energetic secretary, H. A. Collings, of Holyoke, Mass., presented a report of his year's work, which showed that he had left no stone unturned in the interests of the Association, and in concluding said:

"The secretary's work is not completed, nor will it be until long after this convention is over, but I can assure the members that we are larger, stronger, and financially better off than ever before."

Arrangements were then made for resolutions concerning the death of a member, Mr. Rowell, and for a contribution to the Galveston Disaster Relief Fund, after which the session adjourned.

At the afternoon session various business details had attention, after which demonstrations in lighting and posing were given by Mr. Schervee, Mr. Armstrong, and Mr. Henderson, under the skylight, which had previously been arranged on the platform of the hall. In this demonstration the actual making of some of the pictures exhibited was fully explained, and much satisfaction was evinced by all present. In the evening the conventioners attended Keith's Theatre by invitation of the manufacturers and dealers present at the convention.

Second Day, September 13th.

After the formal opening of the session, which was more numerously attended than the earlier session of September 12th, Mr. Darius Cobb gave an eloquent talk on *Photography as an Art.* A brief outline of this speech follows:

Mr. Cobb congratulated the convention on the masterly quality of the present exhibit. He saw in it that progressive spirit which is elevating photography to a high scale of the arts. Photography asks neither favors nor recognition from any of her sister arts. She stands on her own dignity, and looks up to none of them. Advancing as she has since her birth, where will she be in five centuries, which form but a fraction of the age of the fine arts? Mr. Cobb urged the photographer to cultivate a character consonant with the dignity of his profession.

Two years ago the speaker, in conference with the opinions of leading members of the Association condemned the prize system, as he afterward condemned it in

the Boston Art Club. The Photographers' Association and the Art Club have since abolished the system. Now, in concurrence with the president and others, he would favor the abolishment of the salon. The salon of Parisian art has declined so in character and significance that when he sees a picture with the word salon on its frame he is reminded of the Grecian orator, who, on being applauded, turned and said, "What foolish thing have I said now?" Mr. Cobb had served as judge on prizes and salons in painting and photographic exhibitions, and he knew the onerous duties devolving on judges of the salon. No judge is infallible, and so pictures selected for the salon may be inferior to many that are rejected; yet the public, relying largely on the judges as experts, must view the salon pictures as superior to the others, and underestimate the general exhibition accordingly. The system was to him invidious and worthy the fate of the prize system. Mr. Cobb closed with an appeal to the photographers to preserve their nationality and their self-respect.

Mr. Cobb's address was listened to with much interest, and it was evident that most of those present were in favor of the radical movement he advocated.

Mr. John A. Tennant, of New York, then came forward and spoke on "Business Methods as Applied in Photography." His paper is given on an earlier page of this issue.

After the passing of resolutions of sympathy on the death of Mr. Rowell, the treasurer, Mr. George H. Van Norman, of Springfield, Mass, presented a partial report of the finances of the Association. Mr. Van Norman explained that it was impossible to give a finished report until after the close of the convention. The report submitted was as follows:

Balance on hand at close of last year, .	$212 58
Received from Secretary, ...	119 00
Received at door for initiations and dues to this time, ...	342 00
	$673 58
Paid out in checks to date, ...	93 25
Balance, ...	$580 33

(Signed) GEO. H. VAN NORMAN.

The afternoon session was devoted to demonstrations given by the American Aristotype Co., the Nepera Chemical Co., and the manufacturers of "Actino Matt." Mr. Joseph de Nunzo addressed the gathering upon the merits of his "Angelo" paper, and Mr. T. Hovey Allen gave an instructive series of criticisms of pictures taken from the walls of the convention.

The election of officers was taken up at the first session of the

Third Day, September 14th.

The Nominating Committee reported as follows:

For President, C. W. Hearn, of Boston.
For Vice-President, C. A. Johnstone, of Hartford.
For Secretary, H. A. Collings, Holyoke.
For Treasurer, S. M. Holman, Attleboro.
Vice-President for Maine, W. C. King, Portland.
Vice-President for New Hampshire, W. R. Call, Manchester.
Vice-President for Vermont, H. E. Cutler, Morrisville.
Vice-President for Rhode Island, L. L. Anderstrom, Bristol.

Mr. Collings proposed the name of Mr. Van Norman for president. Mr. Schervee seconded the motion. Mr. Armstrong moved that the nominations be closed. The President appointed Mr. Hastings, Mr. Bolton, and Mr. Parkinson as tellers. The number of votes for Mr. Van Norman, 45; number of votes for Mr. Hearn, 13. On motion of Mr. Hearn it was voted to make the election of Mr. Van Norman unanimous. It was so voted.

On motion, it was voted that the secretary cast one vote for the following officers:

C. A Johnstone, Hartford, Conn., for First Vice-President.
S. M. Holman, Attleboro, Mass., Treasurer.
W. C. King, Portland, Me., Vice-President for Maine.
W. R. Call, Manchester, N. H., Vice-President for New Hampshire.
H. E Cutler, Morrisville, Vt., Vice-President for Vermont.
L. L. Anderstrom, Bristol, R. I., Vice-President for Rhode Island.

On motion it was voted that the President cast one vote for Mr. Collings as secretary.

A committee consisting of Messrs. Holman, Partridge and Schervee were appointed by the President to escort the newly elected President to the platform:

Mr. Van Norman said in part:

Ladies and Gentlemen: I appreciate the honor you have conferred upon me, and I only hope that next year we may equal

the convention we have here at the present time. I only hope that we may again have an equal display of pictures which I consider the finest collection ever put together in one hall. We will not be doing ourselves justice if we do not excel, because we have all the work of our contemporaries.

I earnestly hope that we will have the hearty co-operation of every member of the Association in our next year's work.

It was moved and seconded that a vote of thanks be extended to Mr. H. A. Collings for his work in behalf of the Association.

It was suggested by Mr. Smith that one picture be chosen from the salon for the Interstate Convention. According to the proposal of Mr. Townsend, of Nebraska, one picture is to be selected each year. Other conventions in turn pick out one picture, and at the close of the year this convention will have eighteen pictures. The one picture next year will be taken out and another put in.

We believe that the picture chosen to represent the New England Association in this interstate exhibit was a portrait of an old man, by Mr. George H. Van Norman. This picture attracted much admiration, not only because of its strong pictorial quality, but also because of its excellent technique, and was generally regarded as the best single exhibit at the convention.

At the afternoon session Secretary Collings addressed the convention on copyright, and asked the support of the Association in indorsing the copyright resolutions passed at the National Convention at Milwaukee.

The following resolutions were then read and passed:

WHEREAS, Photographs are now the larger means of illustrating the magazines and newspapers of the day, and are in general demand for all illustrative purposes, they are a source of profit to those using them in this way, and for these reasons they are valuable property to the photographer who creates and owns them; and

WHEREAS, Photographs are by law subject to the protection of copyright; and

WHEREAS, The recent rulings of the United States Courts on the "Found in Possession" clause (see 4965) of the Copyright Statutes have made it impossible for the photographer to protect his property against wilful infringers of his legal rights; therefore, be it

Resolved, That the "Photographers' Association of New England," in convention assembled, respectfully ask Congress to so amend the Copyright Statutes as to properly protect all coyprighted photographs; and be it

Resolved, That this Association indorse the work done in the past by the Photographers' Copyright League of America, and give it our cordial support in its effort to secure proper laws for the protection of the photographer's copyright; and be it further

Resolved, That the secretary be requested to prepare and forward copies of these resolutions to the Photographers' Copyright League.

The date of the next convention was discussed, and it was moved to leave this matter solely with the Executive Committee, since dates must be selected which do not conflict with other conventions. A discussion then followed on advisability of keeping salon pictures. Arguments were made that salon pictures in themselves were prizes, which was not consistent with the policy of the New England Convention. Mr. Collings stated that salon pictures were governed by rules of Executive Committee and not by constitution, and that if necessary the Executive Committee could vote to return pictures. Mr. Holman suggested the pictures be given in care of the Art Museum, if they cared to take them. Mr. C. H. Smith then stated that a similar plan had been followed out in several parallel cases: the Detroit convention being cared for by the Detroit Museum, the Nebraska one at the Lincoln College building, etc. Mr. Van Norman said no salon pictures should be held without consent of contributors, and that the disposition of salon pictures was totally in the hands of the Executive Committee.

An informal discussion of exhibition methods followed, after which the convention was adjourned. At the final session Mr. T. Hovey Allen gave a stereopticon lecture on the "Relation of Art to Photography." This was warmly applauded, and with it the convention closed.

The Annual Dinner

of the convention was held at the U. S. Hotel on the evening of the 13th inst. President Pierce occupied the chair, and ove 150 members participated. Mr. S. M. Holman, of Attleboro, was toastmaster. The proceedings were full of enthusiasm.

After several personal introductions Mr. George H. Hastings made a brief address, in the course of which he said he could recognize 37 of the members who originally signed the constitution of the Association in that hotel in 1895. Since then the Association had grown to a membership of 400. The speaker closed by saying that

next year the convention could be made the grandest ever held.

Mr. Darius Cobb, the artist, next delivered a witty speech, and was followed by his brother, Mr. Cyrus Cobb, the sculptor, who stated some of the conditions of success in art, saying, among other things, that it was the science in photography which had secured its advance.

The members were so impressed with what they had heard from the two famous brothers, that a proposal was immediately put to the meeting and carried unanimously electing Messrs. Darius and Cyrus Cobb honorary members of the Association.

Secretary Collings told some amusing stories.

Mr. John Carbutt, a representative manufacturer, was then introduced. He gave interesting reminiscences of the dry-plate trade, and dwelt on the enormous advance which had taken place in the art science of photography.

The closing speaker was Mr. Charles W. Hearn, of Boston.

The Exhibition.

Lack of space and the necessity of closing for press do not permit us to more than mention the exhibition of pictures. These were well arranged around the three walls of the hall, the salon pictures being marked with a white seal. The photographers whose work was chosen for the salon were as follows:

George Van Norman, Springfield, Mass.; Henry H. Pierce, Providence, Mass.; E. W. Histed, New York City; C. R. Reeves, Anderson, Ind.; E. B. Core, New York City; C. A. Johnstone, Hartford, Conn.; Conley Studio, Boston, Mass.; E. D. Spellman, Detroit, Mich.; W. H. Partridge, Boston, Mass.; Herman Schervee, Worcester, Mass.; Knaffl Bros., Knoxville, Tenn.; Morris B. Parkinson, Boston, Mass.; Brookline Art Union, Brookline, Mass.; Mrs. Addie K. Robinson, Boston, Mass.; Eva G. Walborn, Akron, Ohio; W. Buehler, Philadelphia, Pa.; George E. Tingley, Mystic, Conn.

Over 300 pictures were hung in all, and we can't help expressing the opinion that the salon distinction would better have been abolished, as there were stronger pictures out of the salon than some of those admitted. We are glad to see that the understanding grows that the honors system of our exhibitions embodies only the personal opinions of those who serve as judges. It would be better to give the judges power to reject all work below a certain standard of quality, and then make the exhibition simply a demonstration of the best work of those taking part in it as a matter of friendly rivalry.

NEWS AND NOTES.

THE Photographic Society of India will hold its annual exhibit in January next. Twenty medals are offered in open classes in addition to members' medals. Pictures may be sent direct to Calcutta, leaving America not later than October 20th. They may be sent to Mr. C. H. Coates, care of W. J. Keyner & Co., 60 Fenchurch Street, London, who will despatch a case on October 31st. Freight must be paid to London, but the Society will undertake transportation from London to Calcutta, and return to London after the exhibition.

IF in working up a bromide the surface will not take the crayon, the print may advantageously be rubbed with a little fine pumice. This should be gently rubbed in with a tuft of cotton wadding used with a circular motion.

IN England a city water company has notified all amateur and professional photographers that it will levy a rate on them. Five dollars per year is the suggested charge.

A REDUCER which is coming into much favor is one grain of potassium permanganate in four ounces of water, to which two drops of sulphuric acid are added. After reduction a clearing bath of two drops of oxalic acid in an ounce of water may be used.

TO TITLE NEGATIVES.—A transfer ink useful for titling negatives is composed of: A. Sugar, 1 part; glycerine, 3 parts; water, 10 parts. B. Mercuric chloride, 1 part; mercuric nitrate, 2 parts; alcohol, 10 parts. Mix equal parts of A and B

and write on paper. Transfer the writing to the film by pressing it into close contact. The writing will be reversed on the film and correct on the print.

HAVE you ever seen the bicycle girl, or the golf girl, or the bathing girl? Have you ever seen them portrayed? We are not referring to those degrading caricatures which can be seen in some of the print shops, but to a photograph which transfers, as far as it may be transferred to a photograph, the grace, and girlishness, and modesty of "the summer girl." Here is an idea. Have you ever seen the automobile girl—or, rather, girls? Three girls in an automobile, one of those ponderous "cabs" of a couple of years ago, with its hood protecting from a fierce top light, could be made into a charming picture. If you can do it right, and put it in the centre of your show-case, you will have a picture which will make folks stop and will do your business good.

THE Royal Photographic Society of London is looking forward with confidence to an exceptionally successful exhibition during the coming fall. Perhaps this is in part due to the occasional and futile efforts which are made to discredit exhibitions and exhibitors alike. While sufficiently catholic to welcome and appreciate the good work of all schools, the Royal Photographic Society has always been proud to show the best professional work of the year. But this sensible policy has not met with universal approval. However, the Society is solid, and has a large share of John Bull's bump of "getting there" quite sufficient to ensure success.

AT a recent meeting of the London and Provincial Photographic Association, Mr. A. L. Henderson stated that he had been making experiments with potassium cyanide as a restrainer, and had found it immensely superior to bromide; he had also found that a combination of quinol, metol, and adurol possessed great advantages as a developer. His formula was:

No. 1.

Quinol	120 grains.
Metol	40 "
Adurol	40 "
Water	27 ounces.

No. 2.

Sodium Sulphite	2 ounces.
Sodium Hydrate	60 grains.
Potassium Carbonate	60 "
Water	27 ounces.

Equal parts of each to be used.

Restrainer.—Potassium cyanide, 20 grains to 1 ounce of water, and of which 1 ounce could be used to every 4 ounces of mixed developer.

Mr. Henderson recommended that two developers should be made up, one containing the restrainer and one without. Then, if the image flashed up in the latter, the plate should be at once transferred to the solution containing the restrainer. It would then be found that, instead of the shadows fogging over as usual, they would remain perfectly clear, and a perfectly graduated image would be the result.

SOMETHING FOR NOTHING.—It is with a feeling akin to disgust that we note the crass ignorance of the "illustration" editors of many of the cheaper grade newspapers or magazines in regard to the value of photographs. How frequently we see some such offer as "three prizes, value $5, $3, and $1 for the best photographs; all pictures to become the property of the paper." Fortunately it is more a matter of sentiment than injury, for the offers are too ridicuously inadequate to attract even moderate ability.

EDITOR'S TABLE

A NEW and carefully revised edition of HAMMER'S famous *Little Book* has just been issued. It is full of interesting matter dealing with negative making, and the progressive dark-room worker should not delay in securing a copy. Sent free on request by the HAMMER DRY PLATE CO., St. Louis, Mo.

MESSRS. JAMES H. SMITH & CO., 311 Wabash Ave., Chicago, have just published a new edition of their *General Price List and Descriptive Catalogue* for 1900 and 1901. All the new specialties for the professional worker are fully described and illustrated, and the list is one worthy of a prominent place on the photographer's bookshelf.

A NEW COLLEGE.—Mr. FELIX RAYMER has resigned his position as demonstrator at the Illinois College of Photography and, with Mr. F. W. GUERIN, of St. Louis, will open in that city a practical photographic school for the teaching of photography in all its branches. Mr. GUERIN and Mr. RAYMER are a strong team, and should offer a very useful service to those desiring instruction in photography. The new college, which is to open early in October, has our cordial good wishes for its success.

AN attractive feature of the Boston convention was the *Vinco* display, made by Mr. JOHN CARBUTT, of Wayne Junction, Pa., in conjunction with his agent for New England, Mr. A. CROMWELL, 147 Columbus Ave., Boston.

Vinco is now made in three varieties—*Carbon Matt*, *Rough*, and *Glossy*—and the display at Boston proves that it is equal to the best of the developing papers, with some few advantages of its own. Several of the pictures shown in the exhibit were made over a year ago, but were undistinguishable in brilliancy and freshness from those made only a few days before the convention.

We commend *Vinco Platino Bromide* to the attention of our readers with every confidence that they will find it a very useful helper during the coming dull printing days, or for orders which are to be delivered in a hurry. *Vinco* gives any desired tone from sepia to black, and is well adapted for fine portrait work.

INCLUDED in the American Aristo display at the Boston convention was "the largest direct portrait ever made," viz: a life-size figure portrait of a man, taken by flashlight by GEO. LAWRENCE, of Chicago, on a *Seed* plate and printed on a single sheet of *Aristo-platino*. It was a thoroughly good piece of work and a credit to all concerned.

H. A. HYATT'S *General Catalogue*, No. 15, just published, is one of the best examples we have seen among photographic catalogues. Enclosed with a lithographed cover of special design, printed in three colors, its 288 pages include illustrated particulars of everything needed for the practice of photography, from WILSON'S PHOTOGRAPHIC MAGAZINE to the new *Nicholson Trimmer*. It is a handy compendium of photographic apparatus and supplies, and Mr. HYATT deserves great praise for his enterprise in putting out so complete and so tasteful a reference-book for his customers. Copies may be had by sending five cents postage to H. A. HYATT, 412 N. Broadway, St. Louis.

A KROMSKOP studio is to be opened at 18 West 23d St., New York, early in October, under the active management of BURR MCINTOSH. Demonstrations of the Kromskop system will be given by Mr. F. E. IVES, and interesting features are promised.

MR. VINCENT L. CRITTENDEN died at Ann Arbor, Mich., August 24th. Mr. CRITTENDEN spent many years in the employ of the Randall Art Studio, and was much esteemed by all who came in contact with him. He belonged to the old order of practical workers, and knew every detail of his work so intimately that his department (printing-room) was a model of what the photographer's printing-rooms and methods should be.

THE BLAIR CAMERA CO., Rochester, will place on the market, October 15th, a new *Hawkeye* for the holidays which should win considerable popularity. It will be known as the No. 3 Folding Weno Hawkeye, and is designed to meet the wants of those who seek a folding pocket camera of the highest type at a reasonable price. It is the most compact camera extant, making 3¼ x 4¼ pictures, and is fitted with a rapid rectilinear lens of good quality. The dimensions are 1⅝ x 4⅜ x 7¼ inches; weight, 22 ounces; capacity, 12 exposures (or 6 or 2 exposures, according to film), and the lens has a focal length of 5 inches.

THE Actiengesellschaft per Anilin Fabrikation, of Berlin, informs us that it has just been awarded a gold medal at the Paris Exposition for the merits of its manufactures, *Agfa-intensifier*, *Agfa-reducer*, and *Patent Photographic Developers*. The specialties of this well-known house are too well known to need praise from us, but those who have not yet had the pleasure of working with them will do well to get a copy of the booklet, *Patent Photographic Developers*, 1900, just issued for free distribution through the leading dealers.

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NOVEMBER, 1900.

WILSON'S PHOTOGRAPHIC MAGAZINE

DEVOTED TO PHOTOGRAPHY. MONTHLY: ILLUSTRATED.

FIFTH AVENUE SHOWCASES 481
NEGATIVE FAKING. By H. Scofield 486
STOPS, LENSES, AND PERSPECTIVE. By J. H. Agar Baugh 488
THE MAN WE WANT 490
IMOGEN, A NEW DEVELOPER. By J. Gaedicke 491
WANTED: A TRADE PRINTER 493
PHOTOGRAPHING COINS 494
"DOWN SOUTH." 497
A SUCCESSFUL PORTRAIT. By Thomas Dyckson 500
THE SITTER'S RECOMMENDATION. By A. Lockett 501
NEW METHODS AND FORMULÆ 503
THE MISSOURI CONVENTION 505
INTENSIFICATION. By Fritz Hansen 511
ON SPOTS AND SPOTTING. By A. Lockett 512
ENLARGEMENTS. By Robert Manton 514
TEXTILE DESIGNS BY PHOTOGRAPHIC METHODS 515
SOME NOTES ON TONING. By T. Thorne Baker 516
THE CONVENTION A SUCCESS. By W. F. Schreiber 517
RIPENING EMULSIONS 518
"PHOTOGRAPHIC MOSAICS, 1901" 519
EDITOR'S TABLE 520

OUR PICTURES:

Portrait. Engraved from a Platinotype by C. C. Kough, Greensburg, Pa.
"The Prayer." By Knaffl Bros. Portraits by F. G. Schumacher, Mrs. Condon-Hendrick and others.
Pictures from "Down South," by R. Eickemeyer, Jr.

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PORTRAIT

By C. C. Kough, Greensburg, Pa.

VII.

PHOTOGRAP

VOL. XXXVII.

WILSON'S PHOTOGRAPHIC MAGAZINE.

EDITED BY EDWARD L. WILSON.

VOL. XXXVII. NOVEMBER, 1900. No. 527.

FIFTH AVENUE SHOWCASES.

THERE is a glamour over Fifth Avenue, New York, such as is over no other photographic centre in America. The few men whose names stand out as beacon lights of real or reputed success are known throughout the country, and anything relating to them is a matter of much interest. The Fifth Avenue of the photographer is but a mile in length. It rises from Madison Square, round which were grouped, twelve months ago, Falk and Kurtz and Pach. Now Falk has moved up the avenue, Kurtz is following him, and Pach Bros. will alone, or with others of lesser note, represent the old established downtown end. In this short mile there are many well-known names, and with one or two exceptions they are all new-comers. Ranging from the veteran, D. H. Anderson, to the youngest graduate from amateur ranks, they include such names as Falk, Schloss, Core, Appleton, Hollinger, Rose & Sands, Kasebier, Sarony, Dupont, Davis & Sanford, the Bradley Studio, Mendelssohn, R. Eickemeyer, Jr., Ben Yusuf, Histed, and others. More great names are, it is rumored, coming, and the side streets are full of them. What will happen when a business tightness strikes New York, heaven only knows, but in the meantime some are happy and prosperous and others make at least a brave showing of success.

All sorts and conditions of men and women are on the avenue. From Pach, with his many branches and enormous output, or Falk, in his princely studio, which is a great business investment, it is a long cry to the worker who, possessed of little but individuality and grit, does every stroke of the business from posing the sitter to delivering the print, and checks off each dozen ordered as so many days toward the month's rent, or so many dollars toward "wage."

The population on the avenue is perilously near being a migratory one. Reputations have been made, and faded, and their owners have fallen behind or disappeared altogether. Not a few attempts have been unsuccessful from the start, and the unfortunates have betaken themselves home, sadder and poorer for the experience.

A tour up Fifth Avenue is a great event for the photographer who visits New York from some small city. There is so much that is talked about that he expects to see something wonderful. Perhaps at first acquaintance the feeling is one of disappointment, but a closer examination shows him that there is a reason for the success that attends these studios.

Perhaps the visit of the out-of-town man is less agreeable to the photographers than to himself. I may be mistaken. Photographers have a large share of the fraternity notion, and with wonderful unanimity welcome their visitors. But unless they are more than mortal there must at times be a tired feeling when some utter provincial refuses to come to the end of his questioning, or persists in asking "Why?"

The most down-town of the "Fifth Avenue men" is not on the avenue at all, but on Broadway. Broadway was the photographic thoroughfare before Fifth Avenue was known to the fraternity, and there have been fashionable "up-town" studios far nearer the Battery than is Pach's to-day. Pach Bros. were to the fore when they selected their present lo-

cation, and as their customers persist in going to them there is no need to move nearer to the homes of those customers. Pach Bros.' Studio is typical of all on the avenue, for it has no window display, and it is reached by an elevator. Ground is too expensive here for a ground-floor studio, and window space cannot be utilized for photographs. The photographer has therefore to fall back on his showcase, and in this respect the world—*i. e.*, the landlord—is generous. There is a consensus that a photographer must display his wares, and builders who will not deviate a hair's breadth from the "regulations" cheerfully erect a showcase, and often allow one to be placed on the otherwise clear stone of the doorway.

As the means by which these large businesses speak to their patrons the showcases should have sufficient interest to warrant an hour's stroll up the avenue.

Ascending Fifth Avenue from 23d Street, through the tattered and stained Dewey Arch and past Madison Square, we reach first one of the latest comers. When Rose elected to add a "branch" to his Providence Studio his friends extended their sympathy; and at first it seemed needed. Selecting a "tall building" of some ten or twelve stories, and relying on builders' promises, Mr. Rose announced a date of opening. Three months after the date the plasterers were in the building, but the windows were not; but all things come to those who hustle, and Rose & Sands at last were established in their new home.

A new building has no second-hand showcase left from the last owner, and Rose & Sands promptly mounted two new cases on the door front. All the showcases attached to the buildings belong to the photographer. Those which stand on the pavement belong to the landlord. At least that is how I account for the fact that many of the former bear evidence of some care in design and adaptability to their places, whereas the latter are, with but a single exception, of the most unblushing commercialism of design and construction. Rose & Sands fill their case with "private" work. Indeed it would be difficult to find a print on the avenue which was of the usual professional—*i. e.*, theatrical—type. These cases are filled with small prints; there is not one nine inches in height. And there are more men's portraits here than in any other case on the avenue. A dark background seems the favorite, and it is not always severely plain; but it is always in taste, and the accessory is seldom used. There is not a single vignette in the group, and there is a decided preponderance of three-quarter lengths. Whether women or men, sitting or standing, the three-quarter seems the favorite pose. I say there are no vignettes. There are just two vignettes of the usual kind in the whole length of the avenue, and they are both of them atrocious. The vignetting that is done is of the most restrained and delicate kind. A face in light half-tone, with light fluffy drapery thrown around the shoulders, may melt downward into the white background, and a little touch of shade may be worked against the face or neck to give relief. But it is always evident that it is a little thoughtful work on that negative or that print and no reproduction from a stock vignette.

Next door to Rose & Sands, again in a tall building, are Davis & Sanford. Tall buildings are the exception. Anderson is in one, and Falk overlooks them all. But for the rest, an old house turned to business uses is preferred, or a high class modern business building of some five stories.

Davis & Sanford have perhaps, with Aimé Dupont, kept the closest to the "usual thing." In their showcases are half a dozen portraits which would be recognized anywhere as theirs. That stamp of individuality is one of the secrets of success. They are perhaps, of all on the avenue, the most lavish in the use of accessory and background; and yet they do not use them to excess. But the accessory went with the full-length figure; and of all the well-known names on the avenue to-day, but three could be rightly termed accessory users—Davis & Sanford, Dupont, and Mendelssohn. For the rest a chair at most suffices.

Anderson is a standing exception to the rule that the new-comers can push ahead of the veterans. He makes a more lavish display of carbon than any other worker. When I say lavish I do not mean in area. Anderson's little showcases often contain but two or three specimens of his work, but such as are there are usually gems. There is no evidence of those large composite pictures which have made Mr. Anderson rich and famous, although occa-

sionally one may be seen in a neighboring window. To see these means taking the elevator; but for the present we are attending merely to showcases.

Sarony's case is again a double one fastened on the door. This case is one of the most interesting and most perplexing on the avenue. Sometimes it holds a gem from the old time, sometimes a modern production which is worthy of the best traditions of the studio. Again, there may be work which strongly suggests that the specimens have been chosen at random. The present display is typical. Were two-thirds of the specimens weeded out and some six or eight of the best ones left, few would pass the case without a glance of admiration. But the crowding and the unequal quality is fatal to the most effective results.

Just above Sarony the Misses Selby, "Portraiturists," fill their two cases with four "sepia plats." But two years ago these ladies boldly rented the old Dana gallery. Absolutely unknown, and apparently without friends or influence, they so contrived that they are now widely established in this more fashionable part. But it is not uncommon nowadays for ladies to venture into photography, and usually they invade it from the top. Indeed, this invasion by gentlewomen is one of the notable features of the last few years.

Directly across the avenue from the Misses Selby is the studio of Mrs. Kasebier. Here we find the first of those showcases which are such a feature for the next three-quarters of a mile, and which ere long will become "relics of the past." Fifth Avenue is in a transition stage. One by one the old houses and mansions succumb to increased values as business pushes northward, and are converted into stores or workrooms. The old houses stand back from the pavement and are approached by ten or twelve brownstone steps. As the business house, with its window and entrance on the street level, abolishes the steps and the scrap of garden, but dare not advance its door beyond its neighbor's, a showcase may be placed close to the stone balustrades of the steps next door, and so be quite out of the way. As more steps are removed, so this form of showcase will have to vanish. Mrs. Kasebier's case contains but four prints, and two of these are difficult of access, being in the side of the case facing the rails of the next house. The two visible prints are platinum, toned to one of those deep warm tones in which Mrs. Kasebier excels. Far removed from the "usual thing" as they are from the commonplace, the prints attract the wonder of many and the ridicule of some. The mounts are often brown paper of the wrapping kind, and never a creation of the mount-maker, and the signature to the print is like a parody on a Chinese hieroglyphic. But Mrs. Kasebier's case is the one which could least be spared from the avenue, and the one which is ever worth careful study.

A couple of blocks above is Histed's Studio. Here we climb the brownstone steps to an old-fashioned house if we wish to reach the studio. The showcases are bolted to the stone balustrades, and usually each contains one print. Just now one of them contains a portrait of a gentleman, presumably Admiral Sampson, and the other contains a characteristic notice: "Mr. Histed will return to this studio about October 15th for the winter season. Sittings can now be arranged." People have been going to see Mr. Histed and found him out. They will go again and take their chances. Where Histed is there the most exclusive people flock, and if they get the sitting they are happy; and the other photographers say that it is neither influence nor name which does it, but sheer quality of work. Which shows that photographers are a remarkably generous-minded body.

A couple of blocks above Histed's rises the great mass of the Waldorf-Astoria—Falk's Studio, with its "1600 dressing-rooms."

There is no sign of photography on the avenue, and if we venture into the side streets we shall never reach the end; but cannot pass with this brief reference. The work and name of Falk cannot escape us in the hotel, and though the street sees it not, the publicity end of the business is in capable hands.

There is an appropriateness about the locations of most of these studios. Mrs. Kasebier is reached through a store where modern art ware, statuary, etc., are sold. Hollinger's entrance has a floor of old tapestry. Some are over silversmiths. The Campbell Studio is over a Japanese art store, and Core, the children's man, tops a famous maker of pies and high-class confectionery.

Here, close to 35th street, Mendelssohn is in the company of Dodd, Mead & Co., whose windows display rare books or choice editions.

Mendelssohn has the usual showcase. Almost square, scarcely two feet across, and standing on two uprights of strap-iron securely bolted to the pavement. The work is, in its own line, as original as any on the avenue. Nowhere else do we see these women in classic attire and against classic backgrounds. It is the art of years ago, modernized and adapted to present-day tastes. The lightings are so varied that no two are alike, and the trimming follows no law except suitability of subject. These loosely-draped women may be suddenly cut off at the neck or through the waist; and from their leaning pose—a leaning profile appears a favorite one—the cut is usually a diagonal dissection. There is no such thing as vignetting; and as the pictures are usually in a light scale of tone the whole effect must be very taking. Mendelssohn is perhaps the most skilful of the avowed retouchers. There is much work on his negative, but no overworked highlights and no feature altered or modelling lost.

Almost opposite Mendelssohn is the Bradley Studio. On either side of the door a large oval metal plate bears the legend of the firm, who announce photogravures, ivory miniatures, etc. These plates are stately affairs, some thirty inches high by fifteen broad, surrounded by a rich wrought-iron wreath of leaves. The showcase is rather larger than the usual size, and of the usual wood painted black. The side facing downtown commonly contains portraits of men. To-day there is a more varied assortment. The uniformity which usually marks the subject is in this instance given to the mount. All the prints —platinum—are mounted on a dark-gray mount, with the now fashionable narrow, white border round the print. The white border is indeed common on the avenue, which speaks well for Hyatt's new trimmer. Bradley follows a custom common on the avenue of personally signing his work in preference to using a printed or embossed card. These gray cards are effectively signed with red paint. The signature is very small, slightly diagonal, just under the lower right-hand corner of the print. In the uptown half of the showcase pencil-signed white mounts are used. These white mounts have a very delicate India tint centre, with a single white line drawn about one-twelfth of an inch inside of the edge of the tint. The plate mark extends far outside the tint to within half an inch of the edge of the mount. White mounts are not unusual on the avenue. Rose & Sands show nothing but a vellum paper without plate mark or any other mark. Their mounts appear to be cut to the required size from a larger sheet of paper. Two of the workers who use these mounts suggest an interesting question. Hollinger and Appleton each uses a rough light cream mount of rather thick paper; in each case the mount is plate sunk and tinted. Both Appleton and Hollinger have ideas of their own as to trimming prints, and it might almost be said that they do not trim two alike. But the tint is always the correct size for the print. Have they a wide assortment from which to choose, or do they buy the plain sheets and do the rest themselves to the requirements of each individual print?

The photographers are somewhat irregularly placed on the avenue. Between 35th street and 40th street, where Schloss and Appleton are side by side, there is but one studio. Alman & Co. have the usual showcase against the rails of the next house, the one in the doorway, and the unusual distinction of a case inside the doorway. They show a good class of plain professional work — platinum prints, in small sizes, of women and children. On the opposite (east) side of the avenue and a block higher is the case, affixed to the door, bearing the legend, "The Appleton Studio; Portraits of Women Only." Through the glass doors the finely appointed entrance hall of the building and the upholstered elevator look appropriately inviting. Appleton's five small prints in platinum, toned slightly warm—not quite sepia—must prove attractive to ladies of education. There is none of that fictitious sleekness, the bane of so much photography; but there is an evident mastery of the technique of the work. The new school does not in this instance mean either lack of negative quality or erratic printing. And Appleton has the faculty of taking his sitters at their best.

Next door to Appleton is Schloss. The house next door is still "unconverted,"

and Schloss takes advantage of the fact to have the largest showcase on the avenue. His case, some five by four feet, is of unblackened oak as to its base, and the frame which hold the glass is iron, and of the slightest. A board in the centre of the case covered with red canvas holds the prints. Some fifteen of them face down the avenue, and a further number face the oblivion of the next yard. There is no trace of the great professional business of Schloss; all these prints are in platinum, and of people in private life. There is neither glossy paper nor theatrical pose. But there is sufficient evidence of that lighting which is so often remarked in Schloss' work. The trimming is of the usual Fifth Avenue—it is guided by the individual requirements of the print. But Schloss has quite a preference for a print, of course of a standing figure, about three inches broad and seven inches high. And this suggests the thought that the panel, as commercially known, is almost an unknown quantity on the avenue.

The Fifth Avenue photographers are very fond of placing their names, in great gold letters, across the front of their buildings. I wonder if these signs are ever noticed.

Several blocks higher than Schloss we reach the showcase of the much discussed Hollinger. Hollinger has always been great on the business end as on the art side, and his latest visible move has been a new showcase. This is a decided innovation on the avenue, where the usual appearance of the showcases suggests that new ones would be an improvement. Hollinger's case is an ambitious affair of polished nickel, classic in design, plain, but not severely so. This showcase receives, perhaps, more careful consideration than any on the avenue; and a showcase properly handled in the wealthiest part of one of the wealthiest thoroughfares in the world should be worth many hundreds of dollars. For a long time Hollinger's plan was a daily change of specimens. Each of the "Ohio boys" took a day in turn, from the head of affairs down to the office boy, or whatever the youngest member may be termed. But for months Hollinger's showcase has been unchanged. An enlargement, three-quarter length, of a man in dark suit, against a dark background, has faced down the avenue. One hand in his pocket, the right holding a cigarette, and a quiet smile on his face, this man is one of the happiest examples of that posing which Hollinger calls "not posing." Facing up the avenue has been a beautiful head of a beautiful woman. The narrow front of the case, only some five inches broad, held three dainty child pictures, one above the other. This display has just vanished, and we have now a visitation of dogs, little dogs, big dogs, 'cute dogs, and ugly dogs, and with their masters or mistresses of various ages. The "dog idea" has long been popular in England, and very successful, and Hollinger's latest move will charm the heart of every woman on the avenue and prove a strong drawing card.

Trade is ever forcing itself higher up the avenue, but for the next years the advance must be slow. Great houses and wealthy clubs or churches will long withstand any further encroachment. Forty-seventh street is the present high-water mark of the stores, and photography is well in the van, for between 46th and 47th streets there are no less than four studios. This, too, on but one side of the avenue, for the whole length of the east side of the block is the now vacant site of the ill-fated Hotel Windsor. Eickemeyer, Core, Dupont, Ben Yusuf—all the occupants of the block. R. Eickemeyer, Jr., is widely known as one of the ablest and the most versatile of the strong amateur workers. His studio is nominally the Campbell Studio, but the personality of the man overshadows the firm. But surely it must be the firm who are responsible for a large head of McKinley which occupies, but does not grace, the showcase. The two small cases on the door (one on each side) are much happier; and they are examples of appropriateness of choice. This studio is in a modern building, and the glass entrance doors are decorated with simple wrought-iron, which has not been ruined by elaborateness of decoration. The two little black showcases are in keeping with this door, and each usually contains one strong example of work. The two present ones represent a successful portrayal of a New York business man and a dainty picture of a little girl.

A few doors further up Core shows a single picture. He seldom has more than one. This is a platinotype, 12 x 15, of two children. The whole ranges among the

grays, and it is mounted on a board of plain white, with a single border, ruled with leadpencil about half an inch outside the print. Core's one print is carefully chosen, and is equally successful either under the gaze of a fond parent or under the more critical scrutiny of a photographer.

Next door to Core is Dupont. Here the lower step is crowned on each side with a showcase some eighteen inches square and four feet high. Five of the eight sides of these two cases are utilized. Dupont is essentially on the old lines. Accessories and light are not despised by him. The cases are decked with handsome women splendidly attired. Just at present one lady is repeated some half dozen times in as many poses. The pictures are flooded with light, and any approach to sombreness seems unknown to the studio. These portraits of actresses, notables, or wealthy people are always an attraction, and lest the passer-by should heed not, the name of the subject is appended to it.

"Just around the corner," on 47th street, a small sign projects from a door: "Miss Ben Yusuf, photographer." That is all. No showcase; no other publicity. But Miss Ben Yusuf in this most up-town studio seems able to draw customers. And her unconventional originality is better than a large showcase.

NEGATIVE FAKING.

BY H. SCOFIELD.

THE evolution of retouching is one of the most interesting of features to those who are interested in the growth of photographic portraiture. It is almost entirely within the last few years that we have reached any freedom in this direction; but of late the careful, tedious working up of features has been supplemented by much work of a broader nature, in which a stump and chalk, or a brush of color, take the place of the pencil. The materials are such as every retoucher has for occasional use—a few tubes of color, three or four brushes, etc., with a packet of tissue paper of a clear even texture.

Paste a piece of tissue paper neatly and evenly over the well-cleaned glass side of the negative, and next carefully coat the film side with retouching varnish.

The prepared negative is now laid in the retouching desk and carefully examined. It may be, say, an interior, in which a figure in light drapery stands against a dark background; especially will this be the case with "at home" work.

The figure is dense, and before the detail in it can be printed the background will be one bronzed mass. Place another piece of tissue paper over the film side of the negative and very carefully pencil the outline of the figure on the paper. Cut this out very carefully and paste this tissue (except the figure) on the back of the negative, exactly in register. There is now one thickness of tissue over the dense figure, and two thicknesses over the thin parts. Such is the fundamental principle of negative faking, and its scope is limited only by the skill of the worker. If necessary the paper may be scratched away from the dense parts. By using the pencil on the film much detail can be worked into the shadows, or where a broader touch is possible work should be on the tissue. This latter more especially where highlights require brightening. Either chalk or water color may be used, and by a touch here and there, combined with a judicious thinning of the paper here and there, a wonderful range of control is obtained. Working on tissue paper will give a softness of effect not easily obtained with work on the film, and the advantage of being able to either add density or scrape away that already added. In speaking of the wide scope of faking, Osborn Thornberry says: It is surprising what beautiful results can be obtained by simply introducing a little atmosphere. If it is desired it may be made by putting a wash of gamboge over the portion of tissue that covers the distant parts of the view.

The clouds in the sky should now be improved to make them printable.

First deepen the density of their highlights by loading the paper stump with

black lead and rubbing it on the tissue directly over them. Turn the negative over and reduce the shadow portions on the film side, to still further increase the contrasts. This is done by covering the rounded portion of a penholder with chamois leather, and dipping it in emery powder. It is then gently rubbed on the shadows from left to right, taking the precaution to see that the reduction is evenly done. Rubbing too hard will scratch the film and spoil it.

Harshness of contrast is another defect which is very prevalent in negatives, especially in those depicting interior scenes. In "dodging" these they should be prepared in a similar manner to the above, with retouching medium and tissue paper. With the stump and black lead powder go over all the deep shadows, putting an even coat of black on the tissue side, of course not working over the edge on to the high-lights, or it will deepen the contrast instead of modifying it. If the contrast is very strong a wash of gamboge can be used instead of the black lead. The detail in the shadows may be touched up with the pencil, but the high-lights must be left severely alone. The contrast may still further be harmonized by dipping a hog's-hair brush in the vaseline and painting over the high-lights on the tissue paper side. This makes the paper transparent in those parts.

Dirty skies, that is, skies that print muddy or uneven, are another source of trouble to the photographer.

Practically the only method of improving these is to block them out. By blocking out is meant to so cover the sky up that it prints perfectly white. No doubt the best method is to paint it out by means of opaque paint. Squeeze a little of the ivory black out on to a piece of glass, and add a little turpentine to make it semi-liquid. Then take the fine sable brush, dip in it, and gently paint round the edge of the sky close up against the horizon. Having gone all along the outline, fill in the rest with the hog's-hair brush.

Every spot ought to be covered, so that it is perfectly opaque when viewed by transmitted light. The greatest care must be taken not to paint over the edge on to any portion of the view.

More important to the professional worker is the question of portrait faking. What up-to-date worker is there who prints direct from his negative without exercising control. The shadows in the hair must be held back; the white dress is so hard that the detail will not print until the face is lost. Faking is as necessary as it is common.

Some ladies are continually exercising their minds with the problem of how to reduce the size of their waists.

It may be done by means of photography; at least it can be made to look smaller than it really is if the sitter is taken against a white background and a portion of the waist each-side painted out. First of all, two lines must be drawn, one each end, by means of the pencil. They must be parallel to the outside of the waist. The amount so cut off will, of course, depend upon the size of the figure. If a cabinet, about one-twentieth of an inch each side will generally be found sufficient. The sable brush and black paint can then be taken and painted on the background and waist till it reaches the line. If skilfully done detection will be impossible.

A portrait, if brilliantly lighted, may be made to look exactly like statuary by cutting out the background of the negative so that it prints black.

Place it on the retouching desk and take the penknife, hold it upright, and gently but firmly cut round the edge. It must be done *very* gently, or the knife will cut over the edge. Having gone round the outline, hold the knife on a slant, so that the handle points over the right shoulder, then draw it along about one sixteenth of an inch from the outline cut, and it will peel off the gelatine in strips. The whole of the background must be done in this way, first making an incision in the film, and then peeling. It is well to practise this on old negatives first before attempting on a valuable one, as the slightest slip may ruin it.

The knife, too, acts as the opposite to the paint brush when we have a white waist against a black ground. The film is pared away until a thin strip of the plumpness merges into the background; the transition being helped if necessary by a little work on the tissue backing.

For amateurs and professionals alike there is much room for the exercise of discrimination and skill in negative faking.

STOPS, LENSES, AND PERSPECTIVE.[1]

BY J. H. AGAR BAUGH.

THE method of measuring or numbering stop apertures, as published officially by the Royal Photographic Society is, I think, rather out of date. The method now employed for Continental lenses is to get the efficient apertures by focusing the sun on the ground-glass, substituting for the ground-glass a piece of ferrotype plate with a pinhole in it, putting a light behind the pinhole, and measuring the circle of light on the front lens. I cannot see why the old-fashioned method of the actual diameter of the stop-aperture should remain on the Society's books as the official method; that which I have described is used by all the best lens-makers, and I think the Society should expunge the other plan from its records. The U. S. stop-apertures are equally antiquated, only $f/8$, $f/16$, etc., are now used.

I have here four lenses of the same focus, but with working apertures of $f/2.3$, $f/5.4$, $f/7.7$, and $f/11.3$ respectively. In my own experience I prefer the $f/11.3$ lens; I seem to get sharper images with it than when using the other lenses stopped down to the same extent, and I put it down to the thinness of the lens. There is no room for the light to go backward and forward inside, there is less stray light in the camera; and I believe that a $f/5.4$ lens, for instance, stopped down to $f/11.3$, will never give as good results as a $f/11.3$ lens will give at full aperture. I have never seen any statement in print to that effect, but in practice I find that it is so, not only with big lenses, but also with cinematograph lenses, and I attribute it to the fact that there is less reflection and less stray light in the camera caused by the lenses being smaller in diameter and thinner.

The usual method of selecting lenses for cameras of different sizes is, I think, not quite satisfactory; I do not think it is on the right basis, and I want to propose some considerations that I have not found mentioned in any photographic book.

No person of normal sight can see any photograph correctly—perfectly correctly—unless it is at a distance of at least ten inches from the eye. As a rule, I believe the distance is about twenty inches; I find that nearly everyone holds a newspaper twenty inches from the eye. Plates, etc., on a table are also about twenty inches from the eye. I think, however, oculists put the distance at ten inches. For prints on paper I think that no photograph should be taken with a lens of less than ten inches. If, in the case of small cameras, half-plate or quarter-plate, a lens must be used of less than ten inches focus, the lens with which the photograph is taken, or a lens of approximately the same focus, must be held to the eye in order that the image may be seen correctly. If a photograph is taken with a five-inch lens, and it is desired to observe it correctly and comfortably and with correct perspective, and without holding a lens to the eye, it is necessary to enlarge the picture—that is to say, if a quarter-plate picture has been taken with a five-inch lens, it must be enlarged at least twice, if not four times; the resulting picture is equivalent to one taken with a ten-inch or a twenty-inch focus lens. It could then he held at a comfortable distance from the eye and seen correctly.

With regard to the rising front, a photograph taken with a raised front and the camera tilted, must not be viewed with the eye exactly opposite the centre. At photographic exhibitions I do not think the hanging committees consider whether the pictures were taken with a rising front or not, but they should do so if the pictures are to be correctly seen. I propose to use an Abney level whenever I use the rising front.

This instrument can be carried in the pocket, and vertical angles can be very easily measured with it. Then if the picture is hung on the wall I should place it at such a height as to get the same angle, from the usual point of observation, as that from which the photograph is taken, and then the object will be seen correctly.

In taking tele-photographic pictures the level could be used in another way, by placing it on the base-board of the camera, as the rising front is not usually used for tele-photo work.

I have here a print taken with a tele-photo lens giving about ten magnifications;

[1] Read before the Royal Photographic Society, June 26th, and reprinted from the Society's Journal (August 31st).

it must be held at a particular angle above the observer's eye, and at a distance of eighty inches, to be seen correctly. If one looks at the centre of the picture it appears absurd, but when held in the proper position it is seen quite naturally.

In the same way, an object taken with the camera perfectly level should be hung exactly opposite the level of the eyes, standing; if it were hung in a room, hall, or where it would generally be seen by persons who were sitting down, it should be placed at a suitable angle from the position at which it is usually seen.

I strongly object to photographs taken with very wide angle lenses. I think, first of all, that they are absurd. In this case of a church tower, where a wide-angle lens has to be used to get all of the subject on the plate, the print must be seen in a particular way, or if enlarged it must be enlarged to a considerable extent; as such subjects include a larger angle than can be seen by the eye at one time, the degree of enlargement must be such that the observer must turn his eye from side to side to see different parts of the photograph. I therefore suggest that a photograph of a church tower should be taken just in the way that the eye would look at a tower. If we are close to a rather tall tower, in many cases it will not be seen entirely without movement of the eye, and I suggest that such photographs should be taken in sections at different angles and then joined together—I think that can be satisfactorily done—and then the photograph of the whole will be natural. I think it would also, as a rule, have to be enlarged, or taken with a lens of very long focus, so that it could be held at a sufficient distance from the eye.

In connection with the use of the Abney level, I should have mentioned that it does not matter how much the rising front is used, or if the camera is tilted as well. Cross lines must be ruled on the ground-glass and the object at the intersection of these lines must be observed with the level and the angle read off.

I think it is too much to expect that exhibitors will state on their photographs the angle at which they were taken and foci of lenses used; but still I think the hanging committee might notice whether a picture has been taken with a rising front or not, and hang it accordingly.

It is well known that artists often use very long paint brushes, and you will find that in a gallery people stand at different distances from the picture so as to focus it to their eyes.

As regards catalogues of lenses, I do not know whether it would be possible to adopt some other method than always suggesting, say, a five-inch lens for a quarter-plate; I think it is a mistake to call any lens a half-plate or quarter-plate lens, and as far as I am concerned I never used that method. I suppose we shall hardly yet be able to have a catalogue simply giving the diameter of the image covered with different stops, but I think that would be the ideal arrangement.

Some time ago a member showed some prints from negatives taken with lenses of different foci; he preferred one taken with a rather short-focus lens, but I thought the long-focus one was much better. I think short-sighted persons will naturally prefer photographs taken with a short-focus lens, because they can hold them nearer to the eye, and those who are far-sighted will prefer pictures taken with a long-focus lens, and I think that as a general rule they are more pleasant to the eye. I have always found that objects seen through a telescope appear very beautiful, and I believe that the narrower the angle at which the object is seen the more comfortably it may be seen, and that the wider the angle the greater is the strain upon the eyes. I have known field-glasses to give a very wide angle of view, but they have had to be dropped very quickly because they seemed to hurt the eyes, and experiments made by my firm have borne this out. It has been found, too, that microscopic eye-pieces giving a very large angle produce a strain upon the eyes; some day I hope to get an eye-piece made with an iris diaphragm so that the angle of view may be made very small, and I am sure the eye will be made more comfortable. Microscopists and people who use telescopes have found this to be the case, and I believe it is the same with photographs as well.

To retain the shadow-richness seen in a wet platinotype, plunge the prints for a couple of minutes in 5 per cent. solution of gelatine in warm water. Afterward rinse in warm water.

THE MAN WE WANT.

In every office, shop, factory, or business house employing any sort of a staff the chronic difficulty of the employer is to get the right kind of help. The "want" advertisements in the newspapers proclaim this from the outside, and many a story of dismal failure to get men to fill responsible positions may be read in the few lines of these "ads." We know what was running in the mind of the man whose "ad." ended with the words, "Duffers need not apply."

Ask any man running a large business if he has any trouble in getting the right kind of men, and he will smile sadly. You don't want to know more, for his experience is yours if you have been on the same tack. What is the remedy? Only to keep weeding out—a process which is always going on in every business house. The employer is regularly getting rid of those who have shown their incapacity to further the interests of the business, and others are being taken on. No matter how good times are, this sorting-out continues; but if times are hard and business is scarce, so that profits are low and money hard to get, the sorting-out is done finer. Out, and forever out, the incompetent and the unworthy go, self-interest and self-protection prompting every employer to keep the best. Who shall blame him? He is only carrying out the old-world law, never to be repealed, "the survival of the fittest." It is a law which may seem hard, but it can be proved to be *just*.

Sometimes dismissals of employés may seem harsh to the outer world, and hard words are said against the men in power; but not a word is said of the employer, who grows old before his time in a vain attempt to get frowsy ne'er-do-wells to do intelligent work—not a word about his long and patient striving with "help" that does nothing but loaf about when his back is turned; not a word of his struggles to make ends meet and provide the money every Saturday, year in and year out, to pay worthless ingrates for services they have never rendered; not a word of the losses suffered by the employer through the blunders and incapacity of shallow-pated duffers who draw their money as long as they can under false pretences—the pretence of exercising an intelligence which they either never possessed or never tried to exert; not a word of material wasted, tools and apparatus spoiled, and machinery ruined by thoughtlessness and carelessness, if not by gross ignorance.

If there is anybody to be pitied, it is the man who is striving to carry on a great enterprise against fearful odds; whose working hours are not limited by the sound of the bell or whistle, and whose hair is fast turning white through the struggle to keep in line the dowdy indifference, slip-shod imbecility, and heartless ingratitude of those who, but for his energy, would be both hungry and homeless.

If there is any sympathy to spare in the world, let it go right out to the man who, having succeeded to the responsibility of running a business on his own account, finds there is nothing in it—nothing but shabby clothes, plain fare, and perhaps bare boards—not even thanks for the wearying task of directing the efforts of those who have not the brain-power to think for themselves. Many a man whom the world looks upon as successful is probably worse off than his men, if the truth were told.

No man who has endeavored to carry out an enterprise where many hands were needed but has been well-nigh appalled at times by the imbecility of the average man he employs, the inability or unwillingness to concentrate on a thing and to do it. Slip-shod assistance, foolish inattention, dowdy indifference, and half-hearted work seem the rule; no man succeeds unless, by hook or crook or threat, he forces or bribes other men to assist him, or unless, mayhap, Providence sends him an angel of light for an assistant—in fact, one of those men we want in business.

We have heard too much maudlin sympathy expressed for the "down-trodden victim of the sweater," the "homeless wanderer searching for honest employment," the "white slaves of the workshop," and the like; but the employer or works manager who is right among the working classes knows what rot such talk is. Why is it that there are men in the same workshop and in the same trade, some of whom are earning only 6*d.* per hour, while others are earning 1*s.* or more?

Is it not a fact that the men who grumble about low pay lose time nearly every day in the week through unpunctuality, and through keeping the festival of Saint Monday, and who "sub" their wages all through the week owing to their thriftlessness? Ask any works manager what is the usual result of giving a job to the "homeless wanderer searching for honest employment." In all businesses there is a constant demand for good men, and no man who is worth his salt will be long out of a job. It rests with men themselves to attain and hold good positions, and no power on earth will ever alter that fact.

Why don't the well-meaning but simple-minded people who spend their time "slumming," trying to find out evils without endeavoring to discover the remedy—why don't they go out into the world and preach the philosophy that it is in the power of all men "to rise on stepping-stones of their dead selves to higher things," that every man is "the architect of his own fortune," the "arbiter of his own destiny," and that all wealth, honor, and power in the world are favors within the reach of every man endowed with common sense and energy? Teach men that the wisdom of Solomon is equally the wisdom of to-day: "Seest thou a man diligent in business, and he shall stand before kings." Teach a man *that*, instead of the pernicious socialism and trades unionism with which the minds of would-be honest workers are now warped and poisoned. The examples of "men who have risen" from the lowest ranks to the greatest success and influence in life should be held up to the young as an incentive to advancement. The schools should teach lads the principles which govern men's success in life, rather than the dry bones of an education which is worthless unless applied with common sense.

It is this incapacity for independent action, this moral stupidity, this infirmity of the will, this unwillingness to "catch hold and lift," that are the things which put pure socialism so far in the future. If men will not act for themselves, what will they do when the benefit of their effort is for all?—*Penrose's Process Work.*

IMOGEN: A NEW DEVELOPER.

BY J. GAEDICKE.

IMOGEN, the last developer introduced by the Actien-Gesellschaft fur Anilin Fabrikation of Berlin, comes commercially in the form of white powder easily soluble in water.

It may be asked whether it is necessary to increase the number of developers recently brought out. But seeing that one person obtains the best results with rodinal, another with eikonogen, others again with amidol, metol, hydrokinone or pyro, it must be acknowledged that the employment of a certain developer is a matter of taste governed entirely by the individuality of the operator, so that there never can be too many developers, because every developer has its particular properties and pecularities, and therefore the introduction of Imogen is justified.

The qualities of Imogen were at first tested by means of the sensitometer, by which definite numerical result can be obtained, first, because the operator has a definite amount of light, and second, because the character of the image can be better examined by the successive density of each square recorded.

The normal exposure for a sensitometer scaled with 1 to 16 layers of tissue paper was 120 "meter candles" seconds, *i. e.*, an exposure of 120 seconds was necessary at a distance of 1 meter from a standard 1 candle power. The number 16 thus obtained indicates a highly sensitive plate, numbers 12–13, on the other hand, plates of medium sensitiveness. The plates employed were of medium sensitiveness.

The preparation of the developer is very simple. Solution A is prepared by adding to a solution of 10 ounces of water and 1 ounce of soda sulphite crystals, ⅓ ounce of Imogen. If anhydrous sulphite be used take only half the quantity prescribed of the crystals. These experiments were made with crystals. Solution B is prepared from ordinary crystallized washing soda, which is dissolved in double its quantity of water. It is better to pre-

pare both solutions with hot water so as to expel all the air, thus rendering the solutions more stable.

The developer for normal exposure consists of solution A 1 part, to which half a part of solution B is added.

If the solution is freshly made and the plate is correctly exposed, the image appears in 15 seconds, and is fully developed in 4 minutes.

The sensitometer image was developed after normal exposure of 120 meter candles seconds. The numbers 1 to 3 showed a dark shade, but could not be distinguished. The numbers were legible up to 15, but could only be printed up to 13. Thus there were 11 numbers which could be printed from. The density was very heavy and the color of the deposit was a warm black.

To test for under-exposure, half the normal exposure was given, *i. e.*, 60 meter candles seconds, and the developer was modified by diluting solution A with an equal quantity of water and half the quantity of the soda solution, for example: Solution A 1 ounce, water 1 ounce; solution B ½ ounce.

The image appeared in 40 seconds and was developed in 4½ minutes. The sensitometer number 12 could be printed, but number 1 contrasted well against number 2, so that twelve shades were printable and could be counted. This shows that better negatives will be obtained by scant than by abundant exposure.

For over-exposure the plate was exposed double the time given for correct exposure, *i. e.*, 240 meter candles seconds, 20 drops of potassium bromide (10 per cent. solution) being added for every ounce of the developing solution.

The image appeared in 35 seconds and was fully developed in 4 minutes. The number 12 could still be printed. The numbers 1 to 3 had nearly the same appearance, so that there were ten grades that could be printed, but the image was less soft and poorer in color. The abundant addition of potassium bromide, while degrading the finest impressions of light, did not retard development so much as was to be expected. A very large quantity of potassium bromide can therefore be added to Imogen.

A special advantage was obtained when by normal exposure the development was made up with increased quantity of alkali and potassium bromide, namely, 1½ part of A and 1 part of B with 30 drops potassium bromide solution to each ounce of developer. The image appeared in 40 seconds, was developed in 5 minutes, and showed a gradation of numbers 1 to 11 or 12, the great amount of alkali having a favorable influence upon the details in the high lights.

In comparison with rodinal Imogen brings the image out better and has a more powerful action. The character of negatives developed with Imogen is similar to those obtained with hydrokinone.

The new developer works very brilliantly. Even with plates exposed on landscapes during dull and rainy weather, negatives full of contrasts were obtained.

If the negative is too dense, treatment with persulphate of ammonia will reduce it. This ought to be done immediately after the fixed negative has been washed, the advantage being that the density is reduced, and at the same time any remaining hypo will be eliminated, so that after this process a short washing will do.

The following conclusions can be drawn from this examination of Imogen: 1. Imogen is a very energetic and active developer. 2. It produces brilliant negatives. 3. The deposit is of good density. 4. It is especially of use for short exposures. 5. It does not affect the fingers. 6. The time of development is normal, even if an abundant amount of potassium bromide has been added. 7. The best results are obtained if development is made slower by diluting the developer with water, or if a large amount of alkali is employed in addition to potassium bromide.

NEARLY two years ago we referred to the silhouette as one of the possible revivals, and our remarks were widely quoted. Writing to the *Photogram*, Chevalier Lafosse, of Bristol, says that an old interest in this class of work has been revived, and he has offered silhouettes to his customers. Ordinary sitters have but small interest in the silhouette, but the more cultured people appreciate them greatly. The Chevalier—whose silhouettes are not photographic—rightly says that to make a good silhouette is as difficult as to make a good portrait by the ordinary method.

WANTED: A TRADE PRINTER.

THERE is a mysterious something in America called a "pull." A pull is the patronage of some man who has the allotting of situations where the work is easy and the wage big. But, unfortunately, it is always "the other fellow" who has got the pull; and this rather suggests that the article is commoner in the imagination than in the reality. But if the pull is unreal or out of reach, there is a big man in America who is very real and very much within reach. He is the man who wants the thing that is good and new and *right*, and he will pay the price if he gets what he wants. There are many such men, and their grievance is that they cannot get what they want. Give them that and they will take right hold of you. Your friends will say you have got a pull, but you will know better.

There has often been an inquiry for a man who would make development prints —*Velox, Vinco, Dekko, etc.*—in large quantities, and at a trade price. Such letters reach us frequently, and we can give little satisfaction to the inquirers. Here is the latest one:

"Referring to the portraits (frontispiece) in your issues, which we have seen, we wish to ascertain the cost to us of such prints in quantities from photo-portraits furnished by us.

"Noticing the pictures referred to, and liking them, we beg to request you to give us figures, if you did the work, or to refer this to whoever did it. We want price for 100 prints, on 10 x 12 paper, of each of 100 subjects, or 10,000 prints.

"Please inform us under what conditions results equal to these may be obtained. We can furnish photographs of the subjects for copy, and, perhaps, in some cases, could furnish negatives.

"We are considering the use of such prints for book illustration instead of fine engraving."

This letter is evidently from a firm who wish to do business, and an order for 10,000 prints, 10 x 12, is going a begging.

Such an incident seems to suggest a lack of enterprise among that section of the craft which has not enough to do.

Here is a trade ready for the right man, and a trade which will prove remunerative. Any good technical man could undertake the work. He need not be an educated artist, but he must be a man of taste; able to understand what a negative will yield, and how to fake the negative that all its possibilities may be transmitted to the print.

The trade printer, to be successful, would need to organize a system. Exposure would be by artificial light, and this would reduce the most important part of the work to absolute simplicity. A trial exposure, at a fixed distance from the light, would give the correct time, and once that was ascertained, a conscientious boy could do the exposing, whether 100 or 1000 prints were required. Development and fixing would be by the hundred and would not be difficult when a system was perfected. With a correct exposure over-development would be difficult, and wholesale fixing could easily be arranged in such a manner as to prevent any chance of imperfect fixation.

There are dozens of men who could undertake the work. How many photographers or photographer's sons spend their time in waiting for their two sitters a day, or week. They have or can make all the needful fittings—except, perhaps, the artificial light—and they have the requisite knowledge of working. Of course, it would be useless to learn how to make a perfect print and then sit still. It would be necessary to hustle after business, and to be prepared to hustle when the business came. *How* to hustle after business? There are many ways which will occur to the live man, according to circumstances. There are two ways which will cost just nothing. How many drummers call in the course of three months? Let every one see the samples and understand just what the business intends to be. Do not rely too much on this. The drummer is a good friend to all, and he has his own business to occupy him without soliciting orders for a trade printer. But he sees many people in his travels, and some day when he hears a man asking for prints in large quantities he will remember and put in a word for you. The other way which occurs to a live man is to let his stock-dealers and his paper-makers know. Some day a letter will come to them, and they will slip it into an envelope and send it along. But publicity

will not prove a serious problem. When the work comes it may be wanted "rush!" If it does necessitate working fourteen hours a day it will be a good fault; and should the rush become chronic help is easily hired.

Is it entirely hopeless to suggest automatic or mechanical printing? A few years ago a machine was invented and perfected in New York for printing photographs by the mile. It worked satisfactorily, and the pictures which it reeled off were wonderful. But it never was a success in this country. The German who bought the patent-right for his country for a mere song was soon a millionaire, and his business is an enormous one and still increasing.

But whether automatic, and wholesale work be hopeless or not, there is a big business for the man who will get down to rock-bottom business facts on trade printing. How about the art stores? Have you ever seen the atrocious bromide prints offered in some of the art stores? They may be called platinotypes or some similar name, but their knell will be sounded when the publishers get on to something better. The cheap work is so very bad that there are to-day thousands of actual platinotypes being made to sell in stores. Between the platinotype with its slow, careful sun-printing and the cheap rubbish, there is a big opening for the rapidly exposed and developed paper, whether bromide or the newer papers.

The prospects before the man who will reduce the making of development prints to a business basis are indeed bright.

In England you may order a thousand prints from one negative and have them delivered in a few hours. In America, the land of big possibilities and big actualities, you may hunt in vain for a man to supply five hundred prints in a week. Here is an open field!

PHOTOGRAPHING COINS.

THE photographing of coins, medals, or small metallic decorations has one or two points of difficulty to those who are unfamiliar with the work. Some workers have gone so far as to make plaster-casts, and from them electrotypes, of intricate work which required copying. Such a roundabout operation is, however, seldom commercially feasible—the "how good" must be combined with "how cheap"—for we are generally limited in the amount we receive for our skill. It is evident, too, that a photograph from a cast cannot be as fine in its detail as one from an original.

The best background for a medal is a dead black velvet. Hang the medal upon it, and if the inscription is in relief let the light fall altogether, and rather strongly, from one direction only, preferably from one side. Exposure should be ample, and with a slow plate, and the development should be with a view to contrast.

With an engraved medal the work is sometimes a little more difficult. The letters may sometimes be given a sufficient and even prominence by filling them with black or dark-colored chalk—or sometimes the reverse may hold good, and a light or white filling be needed. An old dodge, and one very effective in photographing silverware, is to diffuse the light by a tunnel of gauze, with the camera at one end and the object at the other. A modification of this is to place a piece of white cardboard between the lens and the coin, with a hole cut in it through which the photograph is taken. The card is placed in the sun and tilted at an angle to reflect the sun's light direct on the coin. The coin should be in shade except for the full even illumination which it receives of diffused reflected sunlight. The lens should also be shielded from the direct rays.

It is unnecessary to use two plates in order to secure both sides of a coin. If the coin is backed with black velvet there will be no appreciable light from the background. Arrange the exposure therefore so that the image falls toward one side of the plate. After exposure cap the lens and move the coin further along the velvet, at the same time turning it to the reverse side, and again expose. If the two exposures have been equal the two medals should be perfectly reproduced on the one plate, each face showing perfect detail and equality of tone.

Photography says that American plate-makers are "at last" issuing backed plates, and that they are only backed with black paper—nearly useless for the purpose. *Photography*, or its informant, is misinformed. One make of plates is backed with black paper, but not "only." American plate-backing is usually practical when it comes to working tests.

THE illustrated postal-card, which in Europe has turned thousands of dollars to the photographer, is entering on to altogether too crank a stage. It is said that lace embroidery and similar expensive innovations are the latest fad—a palpable case of overdoing it. The illustrated postal, by the way, is a third of a century old, though the "craze" stage of its existence is but recent.

HONORS from the Paris Exposition fall thick and fast. The several thousands of American publications which were sent for competition have been made happy; for the "Director of Liberal Arts and Chemical Industries" advises that a Grand Prix has been bestowed collectively upon them. We congratulate several of our friends on their participation in this unique honor.

SECCO FILM, which created quite a little fuss a few months ago, has not, it is said, "gone under," but is quietly preparing for big business. We look with interest for this new film which is to take the world by storm.

Colored Photographs. We have more than once referred to the coloring of photographs as an occupation worthy of cultivating. Not that all photographers should turn colorists, but that they should be able, when occasion offered, to tint a picture or miniature. The accomplishment would be especially useful to the many ladies engaged in departments of photographic work. *The British Journal of Photography* takes up the question in a few pertinent remarks:

At one time colored photographs were a very lucrative part of the portraitist's business, but now they are quite neglected. Indeed, if we now visit a dozen photographers' reception-rooms, we shall not see half the number of colored specimens exhibited, except they be expensive enlargements. This used not to be the case. In former days quarter, half, and whole-plate delicately tinted and fully colored specimens were to be seen everywhere, and very profitable they proved; but that was before the *carte-de-visite* and cabinet pictures. Why, since then, their total neglect? It may possibly be accounted for in this way: When the first-named style of portraits was introduced they became such a rage that portraitists had little time to think of anything else, and so when the cabinet came to the fore and superseded it. Hence, colored portraits fell into oblivion, and have not since been resuscitated. Just now the public taste is for pictures generally in color. That being the case, why should it not extend to portraits, if they were made a feature of by photographers? Face and hands of the half-plate size delicately tinted used to be charged for from $2 upward extra on the picture. The $2 work did not take the artist, usually a lady, more than about an hour, yet it was effectively and well done, and it is manifest that it carried a good profit to the photographer. The same might well be done now with cabinet portraits. It would give remunerative employment to many lady artists as well as bring grist to the photographer's mill, if it were made a feature of. That there is still a taste for colored portraits is evidenced by the craze there was a few years ago for the "crystoleum painting," which was chiefly confined to portraiture.

THE following hints were published in a German contemporary several years ago. Several of them will be useful to our younger photographers:

The photographic art must sever the bands of the rigid expression of the sitter.

The way to do this is to study the art and its possibilities.

The pose should always be a restful one—*i. e.*, the position can only be a natural one, provided it is comfortable.

The lighting arrangements should allow of modification so as to permit every part of the subject to receive proper light values; our pictures now suffer from a too general lighting.

It should be the aim of every operator, in subjects with a smooth background, to obtain transparent shadows similar to the effect gained by translucent varnish on an oil painting.

The most natural disposition of the hands is obtained when the hands are employed.

The great essential for a portrait is character.

The operator should employ every leisure moment in experimental exposures, wherein the pose, lighting, time, and development are thoroughly studied, and the comparative relations of the various processes to each other carefully noted.

To remove the impression of stiffness in a picture the disposition of the hands must not be symmetrical.

The general public must gradually be led to prefer, in portraits, character to flattery, and natural surface to the smooth, expressionless specimens of the retoucher's art.

The operator must spend more time with his client, so that he can the better study his model and his expression.

There are practical methods whereby single parts of a head or picture can be brought out more prominently by extra sharpness, whereby the attention of the spectator is directed upon that especial feature, thus making all other parts subjective to the salient feature. Photography in this respect has far greater difficulties to surmount than the painter's art.

It is absolutely necessary that the operator encourage an animated conversation with his model, so as to lead him above the feeling of "being photographed;" thereby only can a pleasing and intelligent expression be obtained.

An amusing story of a photographer under fire during the Boer war is told in the *Australian Photographic Review*. During one of the battles in or around Ladysmith Mr. McDonald and another correspondent, finding themselves under fire, were forced to lie flat to avoid the bullets that were flying around them. To their surprise, a small photographer walked coolly past them some fifty yards right into the thick of the bullets and proceeded leisurely to set up his apparatus, the Mauser bullets hitting the ground all round him with their peculiar clicking noise. His bravery astonished the correspondents, who were neither nervous men. At last it dawned upon them that perhaps the artist did not know his danger. One of them cried out: "Hey! do you know you're under fire?" "The devil!" said the photographer, "I thought they were insects." And snatching the camera up he made for the nearest ditch, where he carefully hid till the completion of the battle. Needless to say that, though the photographer exposed himself, the plates were never exposed.

The well-known firm of C. P. Goerz has introduced a new wide-angle lens of startling range. The lens, which is known as the Hypergon double anastigmat, is symmetrical, and absolutely corrected for astigmatism and distortion, and angle included = 140°, or, if it be assumed that some of the rays are cut off by the mounting, it includes at least 135°. The diameter of the field of view, or, in other words, the diagonal of the plate covered, is five times the focus, or the longest side of the plate is almost four times the focus.

In all wide-angle lenses up to the present, in the most favorable cases the longest side of the plate has been about double the focus. On account of the peculiar construction of this lens, it is impossible to correct spherical and chromatic aberrations, but this will not be of much moment in practice, as the spherical aberration can be cured by stopping down, and the chromatic aberration is obviated by shifting the lens after focusing and before exposure. The lens is provided with only two diaphragms, $f/20$ and $f/30$. If $f/20$ is used for focusing, and it is considered desirable to expose with this aperture, the lens must be shifted nearer the plate; but when $f/30$ is used for focusing and exposure this is unnecessary, as at this aperture both the spherical and chromatic aberrations are obviated. As is well known, with all wide-angle lenses, there is a considerable falling off of illumination toward the edges of the plate, and this it is proposed to obviate by the introduction of a special stop which will equalize the illumination.

There are rumors of a new American "Double Stigmat" rivalling the Zeiss *Convertible*, giving three complete lenses in the single tube.

THE PRAYER

1. Copyright 1900 by Knaffl & Bro., Knoxville, Tenn.

PORTRAIT

II. By Mrs. Condon-Hendricks, Atlanta, Ga.

PORTRAIT

III. By F. G. Schumacher, Los Angeles, Cal.

A BRIDE

IV. By F. G. Schumacher, Los Angeles, Cal.

PORTRAITS

V. By F. G. Schumacher, Los Angeles, Cal.

PORTRAITS

VI. By F. G. Schumacher, Los Angeles, Cal.

PORTRAIT

VII. By H. A. Collings, Holyoke, Mass.

PORTRAIT

VIII. By Alfred Holden, Wissahickon, Pa.

"DOWN SOUTH."[1]

Copyright, 1900, by R. H. Russell, N. Y.

THE CANE FIELD.

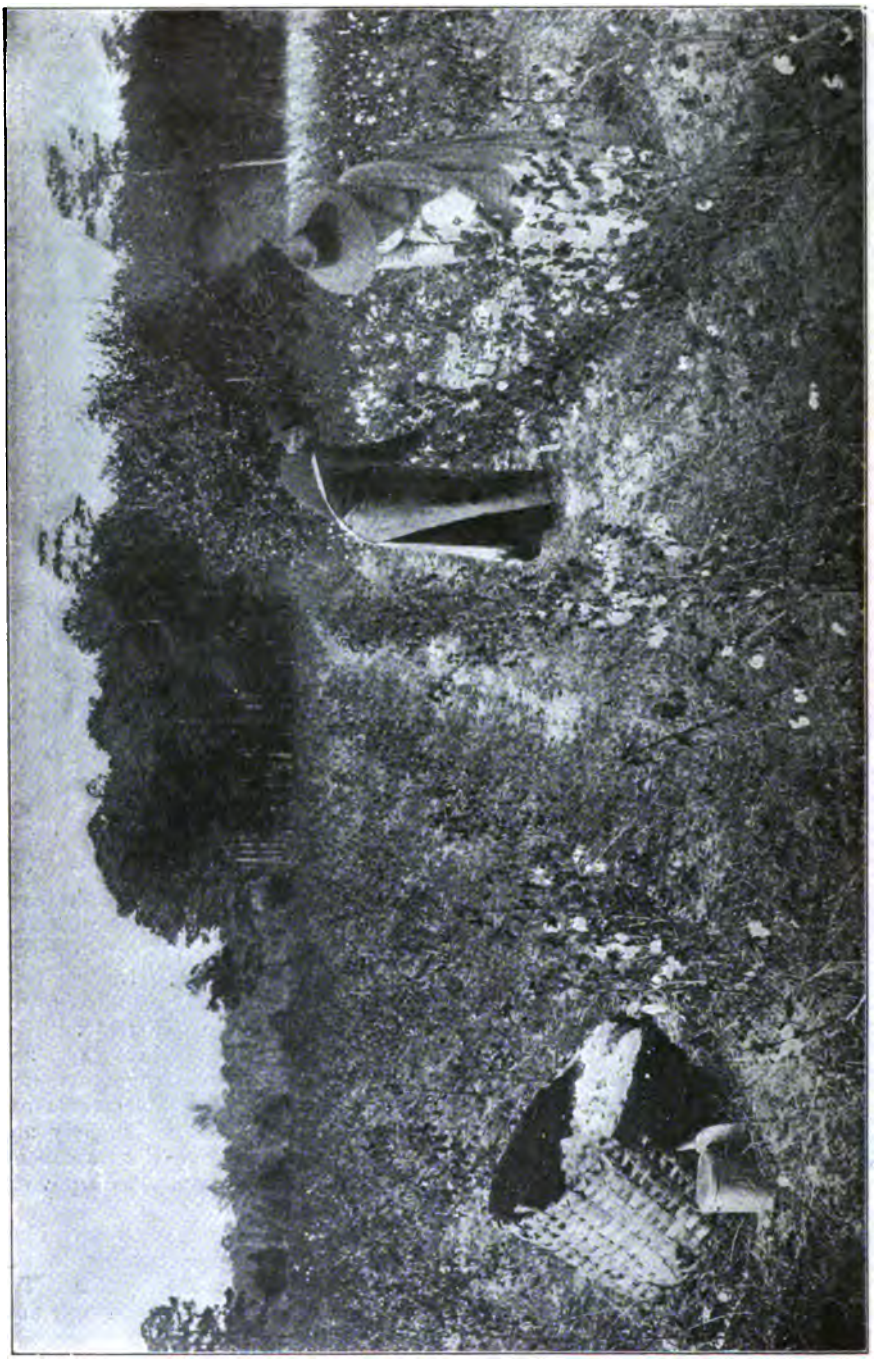
By Rudolph Eickemeyer, Jr.

FIGURE work out of doors, in natural attitudes and amid natural surroundings, is one of the most alluring of photographic specialties. That it is not more followed is a strong tribute to the sad fact that few photographers have an eye trained to see in new fields. When one does strike these new paths—and successfully—the results are invariably popular. In *Down South* we have a book of much interest to photographers, for several reasons. The pictures show a sustained effort by one of the strongest and soundest workers in photography, and should be studied by all who practice or aspire to out-door work. The book itself is an interesting experiment, and will give ideas in placing a picture on a mount which will be new to the average worker.

[1] Down South. Pictures by Rudolph Eickemeyer, Jr., with a preface by Joel Chandler Harris. New York: R. H. Russell, $1.50.

The book consists of forty-eight large pages, 9½ x 15 inches, on heavily toned paper. Four pages are given to the title and to the introduction. In this brief preface Joel Chandler Harris refers to the anomalous conditions so characteristic of Southern life from the earliest days, and sees in them much food for art and romance. He seems surprised that the camera can render interesting even the homely and prosaic life of the fields, and compliments Mr. Eickemeyer in somewhat equivocal fashion.

The book proper shows some forty illustrations, one on a page, ranging in size from 7 x 9 to smaller than 3 x 4. The large pictures are placed methodically near the top of the page, showing a margin of a full inch around three sides, and beneath them several inches of blank paper, relieved only by the title of the picture set at one side of the page. The small pic-



PICKING TIME.
By Rudolph Eickemeyer, Jr.

Copyright, 1900, by R. H. Russell, N. Y.

tures are usually perched in one of the upper corners.

The subjects deal entirely with the colored life of the South: portraits, home-

Copyright, 1900, by R. H. Russell, N. Y.

AUNT CHLOE.

By Rudolph Eickemeyer, Jr.

scenes, work in the fields, and one or two charming glimpses of the countryside.

Mr. Eickemeyer is one of the ablest of the American school of pictorial workers,

and, true to his reputation, he is strongest away from figure work. Aunt Chloe, which we here reproduce, is a typical handling of a not easy subject, and one of the most successful. In some of his figures, notably in "Vanity," and "When the Cat's Away," the result is not entirely happy. The figures suffer, too, by contrast with the altogether delightful field studies. So naturally are the figures placed in these latter, so carefully is the point of view chosen, that there is no conscious feeling of the skill of the artist as we look at them. It is only when we attempt to analyze the pictures that we notice the masterly composition, so carefully studied, and so cleverly handled.

In "The Lonely Path" we have a real bit of Eickemeyer. Just an indication of a path, marked by the glint of light from its own surface, leading through a field of grass. The subject is of the simplest, but a picture has been made of it. "The Cotton-field at Sundown" is another charming bit. The bolls of white cotton fleck the field, but there is no spottiness. The camera has been placed in the furrow between two rows of the snowy pods, and while the rows give the necessary lines to the picture, the narrow furrow—probably but a yard wide—is utilized as an effective foreground. The use of this furrow will be seen in the picture "Picking Time," which we reproduce, and which shows a favorite arrangement of Mr. Eickemeyer's, in which the stooping figures are balanced by the great basket in the foreground. This picture and "The Cane Field" are examples, also, of camera work in bright sunlight.

Down South is emphatically a book for the student. There is much thought put to the making of the pictures, and though the thought is carefully concealed, it will reveal itself to the searcher. The illustrations are of those that grow in interest with each examination, and the discerning worker will not soon tire of them. As a sustained effort in photography the book is a distinct success.

A SUCCESSFUL PORTRAIT.

BY THOMAS DYCKSON.

Is there not too much convention in too much of our portraiture? A portrait is almost too emphatically a photograph. We have certain formulæ of pose, or lighting, or expression, and the use of these gives a certain characteristic sameness to our work. The greater number of photographers are not mere machines. They do not rest content to make likenesses, but strive after more pictorial qualities; and as is the measure of their ability so they succeed.

The present generation has brought, from its juvenile days unpleasant memories of the dentist's chair; and too often they unwisely inculcate their experiences into the plastic minds of present-day juveniles. Something of the same unfortunate survival has trickled from daguerreotype days to this year of grace, and our sitters come to the studio as to a solemn event. Premeditation before the event suggests a nervousness at the time which should be overcome at all hazards.

Those photographers who, in search of business, try to make their studios attractive by receptions, or exhibits, or musicales, are at the same time improving the quality of their work by educating their customers to feel at home and unconstrained.

Few indeed are the successful child photographers; and yet it is through sheer perversity that it is so. The child is so very anxious (quite unconsciously so) to be natural and graceful; but he has been brushed and curled and cautioned until he is quite nervous; and he is instructed to stand with poker-like stiffness that an inch may be added to his stature.

This conscious feeling might almost be termed inherent in our sitters. Frank M. Sutcliffe once said: If only every sitter were conscious of his facial defects, how much less obstinate they would be. How much greater, too, would be the chance of securing a likeness if one could only have the opportunity of studying sitters out of the studio. Every photographer must have been struck with the difference between the appearance of his sitters in the studio and their appearance at home or in the street. Generally they look too old in the studio; this may be owing to the

intenseness of the studio light, or the state of nervous excitement they have worked themselves up to. When the light is at fault would it not be better to sacrifice roundness and all other photographic qualities if a happier and less careworn portrait could be made? As it is a likeness rather than a picture that sitters wish for, care must be taken not to risk the loss of the former by attempting to make the latter, The aim, therefore, should be to secure, by suitable lighting and treatment of the sitter, a negative which will merely require spotting out at the hands of the retoucher; even this spotting may often be dispensed with when platinotype is used. It is these good qualities which those sitters who are artists see and dwell on; they understand, too, why certain oddities of feature are subdued—in short, they have by training gained the power of seeing themselves and knowing what they are like.

"If I could only be taken when I did not know," is an oft-repeated cry, and shows that portrait photographers have yet much to learn, yet the most successful photograph made without the sitter being conscious of the taking would have far less to show than one made when both sitter and photographer were working together harmoniously.

This cry for naturalness suggests the thought that there is a great vein almost unworked in what are sometimes called genre pictures. I mean pictures of real, genuine, "at home" subjects, or of people engaged in some work or occupation. Talk of the lack of originality! Why do so many photographers make a picture of a blacksmith? This poor, overwrought subject will be familiar to every one, but how many have seen a lumberman or a farmer from the camera of a professional.

We have been with the old, old folks. Cottage interiors, in which some ancient man or woman toils over some light task, have long been common, but they have scarcely been professional work in the usual acceptance of the term. We are now commencing, and rightly, at the other end.

Pictures of children engaged in some light pleasure are becoming more common. Children playing with their toys, children busy with juvenile teacups, or even interested in some object outside the picture are a wonderful advance on the old posed, overdressed model; and they suggest that similar work on those who are neither very old nor very young would be—though perhaps more difficult—equally successful.

THE SITTER'S RECOMMENDATION.

BY A. LOCKETT.

WHAT part do the recommendations of his clients play in the building up and extension of a professional photographer's business? The question is interesting, because rather difficult to answer. Advertisement is said nowadays to spell success, and certainly none better could be had than the personal praising of our work to others by people we have pleased and satisfied. Can the photographer, then, rely on such kindly remembrance as a necessary consequence of the creditable execution of his orders? Every owner of a studio is well used to friendly and unsolicited promises of recommendation from sitters he has had the good fortune to entirely satisfy; but, after the first flush of gratification has died away, how many of them call to mind their benevolent intentions? Only a very slight knowledge of human nature is required to anticipate the reply that the proportion is small indeed. This statement is made in no unkindly or carping spirit; possibly many excuses may be found, among which, no doubt, bad memory may be included. What photographer is there who will not on occasion speak feelingly and sadly of that quick realization of the instability of good intentions, which is one of the first lessons learned in the school of experience? A fair damsel, for instance, the pride of a family of some local standing, comes to sit for her portrait, beseechingly asking to be made as good-looking as possible. Her proofs turned out things of beauty. Pleased and delighted, she hints at speedy visits from all her friends and relatives, each similarly charmed and anxious to become possessed of equally good photographs of themselves. But, alas! not one of them comes, nor does

the young lady herself ever increase her original order.

Many such a case will easily recur to the professional memory, and does not tend to enhance our faith in the practical value of hastily made promises. To be sure, now and then we come across a specimen of that *rara avis*, the sincerely and lastingly appreciative sitter, whose recommendation brings custom to us. It is not always those who most demonstratively express their satisfaction who are really the best pleased, and sometimes the knight of the camera is agreeably surprised by new sitters mentioning, as having induced them to come, some past client whose commendation was least expected. It has even happened that fresh custom has come by the instrumentality of those who were absolutely angry with their portraits. An amusing example occurred lately. A rising photographer had, by one of those perverse mischances that none may avoid, taken a really execrable portrait of a certain provincial mayor. To call it even a caricature would have been flattery, and the perpetrator had resigned himself to the abandonment of all hope of any orders or patronage from that quarter. To his intense surprise, however, scarcely a week after, appeared the mayor of an adjacent town, saying that he had been advised to come there for his portrait by the municipal magnate before mentioned. The result was eminently satisfactory to the photographer, and, meeting later the client of whom he had taken so unflattering a picture, ventured to thank him for his kind recommendation. His worship grunted. "Oh," said he, "I didn't tell the man to come to you because I liked my pictures, but because I detested him!"

Such occurrences as that just related are, needless to say, sufficiently infrequent to be safely ignored from the stand-point of business utility. As we have seen, even when the sitters are pleased, it by no means follows that they will try to influence others in the photographer's interest. Unquestionably in the past personal recommendations were more frequent and had far more value in building up a probable connection than at present. Nowadays people have more independence, are more in the habit of judging and choosing for themselves, and therefore less likely to take anything at another's valuation. If it appeals to them as good and worth their having, they will straightway patronize it, whether or not it is praised by some one else.

If, then, the photographer has not much to gain by the favorable mention of his clients, can it be said that he has nothing to lose by adverse comments when his work is for any reason unsatisfactory? It is, unfortunately, true that the public are, at the best of times, difficult to please, and that when discontented they find no particular difficulty in communicating their grounds for dissatisfaction to a wide circle of friends and acquaintances. A. gets a picture of Mrs. A., for instance. Now, the latter is decidedly good-looking, and is well aware of the fact. Her portrait, however, renders her as a decidedly dowdy and unattractive female. Perhaps it was her fault, perhaps the photographer's; be that as it may. The indignant A. shows the offending print to sympathetic kindred and cronies by the dozen, each of whom helps to pass censure on the unlucky artist, probably forming also resolutions never to give him a sitting. It is evident how much real harm may be done to a photographic business in this manner. The taking of one bad picture is, in fact, sufficient to counterbalance the good effect of a score, acting as a powerful antiadvertisement. We all know that failures must be; no man is infallible, and, where there are so many factors of disturbance to be overcome, little wonder that even the photographic Homer sometimes nods. Happy is the portraitist who makes the fewest mistakes.

There are occasions, undeniably, when the cleverest operator living could not produce a satisfactory result to save his life, as, for example, when a more than usually ill-favored individual has to be taken. It is at such times when the artist wishes fervently that he might venture to adopt the procedure of some of the early lights of the profession, and exercise a right of veto on his sitters. But, no, the uninviting face must be reproduced, with what little alleviation retouching can give, then to be shown round and expatiated upon, more or less to the photographer's detriment.

If it is not always possible to secure an artistically pleasing portrait, it is certainly in our power to see that no badly finished or slipshod work is ever allowed to pass. People are more given to noticing such lapses than might be imagined; indeed, it may almost be said that the public would

rather have a second-rate picture well finished than a first-rate one that is not. We may flatter ourselves that our clients will not notice such trivialities as a tiny lump carelessly missed in the mounting, a roughly cut edge or imperfectly square corner, and such like little offences against perfect technique, but our hopes are falsely based. They do notice them, and also that other photographers avoid such lapses. So our critics draw their own conclusions, and very probably make haste to communicate the same to others, in a manner hardly conducive to our best interests.

The few recommendations that are given by the sitters are often quite as much the result of their appreciation of courteous treatment as of satisfaction with the work done for them. It is wonderful how politeness and diplomacy pay in the world of business. The public enjoy having their little idiosyncrasies considered, a certain amount of gossiping patiently listened to, or to be discreetly complimented on a pretty dress or a fashionable coat, when it can be done without officiousness. Courtesy is easily cultivated; there is nothing hollow or false about the genuine article. Where servility and sugared falsehood fail to impress, true politeness generally brings its reward. Employers, as a rule themselves the most courteous of men, would seem to some extent to be aware of the importance of the manner in which their customers are received by the stress many of them lay on the necessity of obtaining tactful and clever receptionists. In some reception-rooms, though happily very few, the sitter is treated with chilling indifference, and led to the studio as a criminal going to execution. It is hardly necessary to say that such treatment is not productive of recommendations, to say nothing of good orders.

It has certainly been the happy fortune of some photographers to have clients whose generous patronage and good words have helped them to establish a successful business. Such cases, however, are very rare, and not to be reckoned among ordinary probabilities. It would appear, then, that a professional reputation principally depends on ability to produce good work. Each picture turned out by a truly capable man is a finger-post pointing to all who see it to his studio. An artist of genuine ability, provided only that he have a certain aptitude for business, need fear no lack of customers if he has no other advertisement than the products of his skill. The work itself will advertise him.—*British Journal of Photography.*

NEW METHODS AND FORMULÆ.

Correction of Over-exposure. A. Schmidt describes a method for the correction of over-exposures which differs considerably from those generally employed. He claims that it will *always* yield good negatives, even if the plates have had six or ten times their proper exposure. The plate is treated with a normal developer, and if it has been over-exposed and becomes rapidly gray all over the surface, it must be removed quickly from the developer and be very thoroughly washed. After this it is placed in a 5 per cent. solution of silver nitrate, and allowed to remain for a few minutes, so that it may absorb a sufficient quantity of the solution. The plate is then held by a corner and flooded with developer; development begins, and when apparently complete the plate must be washed rapidly and fixed in the usual way. If the contrasts are not great enough, which may easily happen if the plate has been considerably over-exposed, the negative must be intensified in the same way as a wet collodion negative. Two solutions are made: (A) Pyrogallic acid 10 parts, alcohol of ninety-six degrees 100 parts; (B) Silver nitrate 4 parts, citric acid 200 parts, water 200 parts. For use, add 4 cc. (60 minims) of A to 100 cc. (3 ozs.) of distilled water, and just before pouring over the plate add the same quantity of B. When sufficiently intensified, the plate is again fixed and washed.

Keeping Flowers for Photography. According to M. Lefebre, writing in the *Photo Revue*, flowers for photography should not be put into a vase immediately they are cut, but should be taken and lightly washed in water as fresh as possible. When the flowers have been well moistened, the vase which is to receive them may be filled with a solution composed of 15 grains

of salt, ¼-ounce of white soap, and 10 ounces of water. The soap should be cut into thin slices in order that it may dissolve quickly, and when the mixture is complete, a little powdered borax may be added. This latter addition is not always necessary, but flowers which are richly colored keep their condition longer when there is a small amount of borax as well as common salt present. If the flowers are to be kept for several days, then other precautions have to be taken. Every morning they must be taken out of the mixture, and the ends of the stems washed for two or three minutes in a stream of running water. They must then be moistened, as previously described, before putting them back in the soap solution, which should not be used too often but changed every two or three days. It is claimed that flowers, even the most fragile ones, can be kept in this way for several days, while he has seen some remain unaltered for as long as three weeks.

A green tint may be given to bromide prints by the following treatment:

Immerse for a minute in

Potassium Ferricyanide	30 grs.
Water	2 ozs.

Remove and rinse for a second or two and immerse in

Iron Sulphate	20 grs.
Water	2 ozs.

When deep blue, remove and well wash. Then immerse in

Sodium Chromate	10 grs.
Water	2 ozs.

A final wash completes the work.

Unusual tones are not usually advisable on work for customers, but they sometimes make an attractive novelty in the showcase.

Ferrotypes. The ferrotype is still a moneymaking power in the land, and in spite of the "dry" ferrotype plates the worker usually makes his own. Here are the formulæ suggested by George Rau for the purpose:

Bromo-iodide of Silver Collodion: For instantaneous ferrotype plates, dissolve 120 grains bromide of potassium in 3 ounces of water; dissolve 120 grains of nitrate of silver in 3 ounces of water; pour the bromide of potassium solution into the silver solution, little by little, until it is done curdling; let it settle; pour off the water; wash three times with water, letting it settle each time; then three times with alcohol, after which add 16 ounces of alcohol and 1½ ounces of iodide of potassium, ground up like powder; shake well for half an hour; stand by in the dark for a day or so, when it will be ready for use.

Plain Collodion: Alcohol 9 ounces, ether 16 ounces, cotton 240 grains. To 16 ounces of this collodion add 2½ ounces of the above sensitizer; shake well. Dissolve 30 grains of bromide of potassium in as little water as possible; add to this, shaking well after each addition; then let settle.

Bath: One ounce nitrate of silver, dissolved in 12 ounces of water; dissolve 3 grains of iodide of potassium in ½ drachm of water; pour it in the solution; shake well; let it stand a day in the dark; then filter, after which it is ready for use.

Developer:

Water	64 ozs.
Sulphate Iron	6 "
Acetic Acid	7 "
Alcohol	6 "

A very sensitive collodion for ferrotype plates may be made by adding two or three drops of iodide of iron to every 2 ounces of ordinary ferrotype collodion, shaking well.

Keep the collodion from the light, and make little at a time, as it very easily decomposes.

COLLODIO CHLORIDE prints can be toned to a bright blue by washing for ten minutes in running water immediately after printing; then fix for ten minutes and wash again for ten minutes. Tone in

Lead Nitrate	150 grains.
Ammonium Sulphocyanide	80 "
Chloride of Gold and Potass.	1 grain.
Water	4 ounces.

When toned sufficiently wash again for fifteen minutes.

This is not to be commended on the score of permanency, but as a novelty it may be attractive.

THE MISSOURI CONVENTION.

THE seventh annual convention of this Association opened on Wednesday, September 19th, at 10.30 A.M., with an address by President Douglass, of Columbia, which we publish in full as containing much practical common sense.

PRESIDENT'S ADDRESS.

In accepting the presidency of this Association, with which you honored me at our last meeting, I was aware that it would necessitate my being prepared to make an address at the present meeting, and I faced the inevitable, although speechmaking is somewhat out of my line. I shall not occupy much time in the remarks which as a business man I wish to address to you as business men with practical ends in view.

This society is maintained to encourage a fraternal spirit among its members, and to enable us as craftsmen to carry away from these annual gatherings fresh ideas and suggestions, which will enable us to establish our businesses on sounder principles and secure more remunerative results. Each year should show a distinct advance, and every member should be stimulated to seek the highest position attainable.

It should be the desire of every one to dignify our profession and become worthy of the respect and esteem of the community wherein his lot is cast. The tintype man, the van photographer, and the itinerant artist are wholly responsible for the ideas entertained in many minds as to the status of photographers as a class. A man in any business who descends to methods properly known as schemes and fakes can scarcely be surprised if he becomes classed with the fakirs. Such men are a harmful element and prejudicial to all of those who are in the same business, though conducting their operations on much more reputable principles.

Photographers should be wise enough to regard themselves as business men. There may be a few, even here, who prefer posing as artists only, but it seems to me that while artistic excellence should be our constant aim, the substantial reward of profitable results should never for one moment be lost sight of.

At these gatherings those who have devised new plans, or hit on new methods, or have any original ideas to offer, need feel no hesitation in openly giving us the benefit thereof. While such information will be of immense service in enabling each individual to make fresh headway, individualism with its insistence will always keep the most able man in the lead. Talented men of strong personal ability, whose acquirements have carried them to the front ranks, are seldom, if ever, outmarched or outflanked by their competitors. They may, however, tell their friendly rivals how they arrived at their eminent positions, and where they intend to go. I should like to say a word here to deprecate any feeling of jealousy against the successful man. It is the source of much petty meanness, and the admission of the green-eyed monster demoralizes and weakens the man who admits him as a guest. To decry them is useless, and to grudge another man a well-earned success is a sign of a little nature.

There has been considerable discussion in the journals devoted to photography as to the relative merits of what are called the old school and the new school of photography. Into that discussion I cannot enter at length, nor can I give an opinion on the merits and demerits of the many new inventions and new departures recommended by the advance guard of the experimenters and inventors. I do most distinctly and emphatically recommend you to adhere to all old methods and adopt any new ones which will enable you to turn out the highest class of work and secure the most profitable results.

There are extremists in every walk of life, and one of the tendencies of the time is toward exaggeration. It should be borne in mind, however, that a labored effort to appear extraordinary is tolerably sure, sooner or later, to border on the grotesque, and that in attempting to be startling there is peril of becoming just a trifle ridiculous.

The best of the old and of the new schools can be made conducive to progress and profit, and I am convinced that the man who clings to the old paths and keeps in the old ruts simply because of their antiquity is as likely to miss the main chance as is the man who is always ready to exploit new departures because of their novelty, and not because they possess sterling merit.

Philosophers tell us that raw haste is half-sister to delay, and it is equally true that stagnation is the foster-mother to fossilism. We must avoid fads and isms and schools and schisms; we must be wide-awake and progressive, but common sense must guide. And we must remember that at times it is the part of wisdom to make haste slowly.

Let me again remind you that photography opens up one of the widest fields for individual artistic expression. No field of art has a greater range of possibilities. To emphasize my point, let me quote you what one of our leading men, Pirie MacDonald, has pithily given as his views on the subject. In one of his invaluable contributions to WILSON'S MAGAZINE, he says:

"No two men have made pictures that are in any way alike. Each man has shown you what he thinks and feels is beautiful. Each man shows the influence of his heredity and training in what he thinks is beauty. And photography gives into the hands of the artist the power to express what he thinks, seriously and honestly, is the combination of truth and beauty. Few photographe rsrealize, when they look at a fine head by this or that noted painter, how much study, observation and hard work went to the preparation of the man before he could put his brush to the canvas with such telling effect. It is the art that draws our admiration, not the mixing of the paints; the interpretation of the subject by analysis on the part of the artist, not his skill as a draughtsman or colorist. No manual can teach this, but the power must be gained by the

education of the eye and a continual study of our subjects in every pose and light at home or abroad."

Every word of these remarks is true, and it should stir the ambition of all of us as we see what an illimitable field is opened up on our profession and what opportunity it offers for achievement. We can be governed by no fixed rules and trammelled by no formulas. Stereotyped methods will not aid us, and no man can put us in the way by advice or suggestions unless we have the capacity. The artist instinct must possess us, and we must by thoughtful attention cultivate whatever faculty we possess if we are to produce the work which will satisfy and which shall bear the stamp of excellence.

To possess a camera and other apparatus necessary to take photographs does not guarantee an artist. It is the man behind the camera, as behind the gun, which counts. The man with artistic perceptions and good taste, of sound ideas of the value of light and shade, and of natural grace. These are the equipments necessary to become really skilled in our art. A photograph is not always a picture, nor all pictures likenesses. While modern appliances aid all to produce better work than was possible several years ago, there must be an inherent artistic sense and correctness of taste in addition to first-class mechanical appliances if we have any desire to lay just claim to the title of artists in photography. (Applause.)

The meeting then adjourned until 2 o'clock.

Second Session.

At the opening of the meeting the Secretary read letters from Mr. Guerin, Mr. Strauss and Mr. MacDonald.

President: The next order of business is the report of committees. There is a committee on by-laws, but they are to report to-morrow. Nominations and election of judges are the next on the list.

The following gentlemen were then nominated and elected to serve as judges: A. H. Curtiss, of St. Louis; A. H. Castor, of Carthage; C. T. Pomeroy, of Kansas City.

President: I would like the judges to make a sealed report and present it on Friday morning. The suggestion is that you keep your decisions *sub-rosa*.

The selection of the place of meeting for 1901 then took place.

Mr. Robertson: Mr. President I want to speak for Mexico, Mo.

Mr. Stewart: Mr. President there is no more beautiful city in the United States than the little town I have in mind, and that is Carthage. She has an electric line running to Webb City, Carterville, Joplin and Galena, and has every facility necessary for a successful convention. I would like to place in nomination Carthage.

Mr. Thomson: I second the nomination.

President: Any other nominations?

Mr. Robertson: I withdraw Mexico.

President: You have heard the nomination, are you ready for the question? The ayes have it. The next place of meeting will be Carthage, Mo.

Mr. Curtiss: Mr. President, we have with us our honorary member, Mr. Cramer, also Mr. Hammer. I am sure we should like to hear from those two gentlemen.

Mr. Cramer (to stenographer), Don't write anything down, please.

Ladies and Gentlemen: I am here to enjoy your company. I don't know what I could say that would be of interest to you. I don't know what I could say that is new in the dry plate line, only that we are all trying to improve the quality of our goods.

Mr. Curtiss: Tell us your early business experience.

Mr. Cramer: When I came from the old country in 1859, I came with the expectation of finding a position as a clerk. This was at the time very difficult, as there was one of those panics prevailing which we have occasionally before the election. Well, I ran my legs off to get a position. At that time the business houses were discharging their old help and they were not very much inclined to engage a novice, but I had one good lesson: when you have no intention of giving a young person a position just tell them so, and don't keep them waiting and waiting. I always tell them point-blank that I am very sorry but I have nothing for them, instead of keeping them waiting and feeding on promises. Now, then, at that time I found temporary employment in a fancy store at two dollars per week. In Europe I had been in the office of a wholesale house and had a respectable position. Here I had to do all sorts of work. After several fruitless attempts to improve my position, I met John A. Scholten, who was for quite a long time the leading photographer in St. Louis. Having a natural inclination toward chemistry and photography, I gladly accepted his offer as an apprentice, and learned the profession with great satisfaction to myself. The road to success in the beginning is sometimes difficult. I was to work six months without compensation and did not get even two dollars a week. After three months, however, Mr. Scholten voluntarily offered me a salary, and it was gradually increased to fifty dollars a week.

Now, when I started for myself in Carondelet, one of the suburbs of St. Louis, I was used to Scholten's being rushed with business, and I considered whether I should keep open Sundays. Well, I concluded to sacrifice some principles; but there were no customers, so it was all in vain. Then those hard times before the war came. Business was at a standstill; nothing was going. All I took in for fourteen days was 50 cents, and this was so welcome that I forgot to examine the coin, which proved to be not even 16 to 1, for it was a counterfeit.

Then came the war itself, when the excitement ran high. I could not resist, and joined the army for three months. In the beginning the service was very hard, for the war came very unexpectedly, and Uncle Sam was not prepared to take care of us. We had no uniforms, only worsted jackets, which stretched considerably when it rained. We had no tents and no beds, and had to sleep on the ground, rain or shine. I had only one suit of clothes, and another suit, which my mother sent me through the sutler of our regiment, fell into the hands of the rebels. I had to wear my only suit day and night, so that I was very glad when my three months expired and I could get back home. At that time greenbacks were everywhere and gold was very scarce. For some time a $20 gold piece was worth $55 in greenbacks.

I was in the photographic business twenty-eight years. In 1880 I became acquainted with Mr. Herman Norden. He was one of the first to introduce dry-plates in this country. What he told me of them was very interesting to me. The great advantage of the plates was that they could be prepared ready for use in advance. Formerly every photographer had to make his own plates and use them immediately after being prepared. If he had to make pictures outside of his gallery he had to take his whole dark-room outfit with him, while now you can take pictures in China and Japan and come home and develop them. I have heard from a friend in California who was married ten years ago, who took some plates on his bridal trip and exposed quite a number. When developing he overlooked some twenty of them, which he found put away. These he developed ten years afterward, and sent me prints from these negatives which were fine. I was surprised. It is an extraordinary case, and I would not advise you to try it. It is unreasonable to expect such a sensitive product to keep for years, and you should see that your plates are fresh. If your dealer sends you old plates just do as a lady would if a dealer tried to sell her old dress goods which are out of date; she would not accept them.

Now, after getting acquainted with Mr. Norden I made a suggestion that we should join hands, and offered him to go into partnership with me, which he accepted, and we immediately began experimenting. In the beginning we usually worked until late into the night, and once when we had finished cooking one emulsion we came to the conclusion to try an entirely different method, and to do so at once. Our stock of nitrate of silver being exhausted, I had to go quite a distance to my gallery for a new supply. It was two o'clock in the morning when we started the new emulsion, which kept us at work all night. Fortunately the new way proved to be a success and gave us the first perfect plates, of which I took samples to the National Photographers' Convention at Chicago. This was the first time that dry-plates, which so quickly and thoroughly revolutionized our mode of working, were introduced to the fraternity. Besides ourselves, John Carbutt, of Philadelphia, and D. H. Cross, of Indianola, Ia., had dry-plates of their make at this convention. A committee of five photographers from different cities was appointed to investigate the new process and report on the merits of the different plates. Their report was unanimous in our favor, which gave us a great lift in our new enterprise. Our facilities were at that time very primitive and limited, and many obstacles had to be overcome before we could manufacture plates successfully.

The partnership of Cramer & Norden was dissolved in 1883, and thereafter the business was carried on in my name. Mr. Norden started for himself first in St. Louis, and then in the East until 1889, when he returned to St. Louis to take charge of one of the departments in my factory, remaining with me until his death, on August 13th of this year, after a prolonged illness.

From a very small beginning the dry-plate business has grown to vast proportions and is being put to new uses every day. In conclusion I thank you for your kind attention, and hope that this convention may prove a source of pleasure as well as profit to you all. (Applause.)

The President: Mr. Hammer, will you please give us a few words?

MR. HAMMER: *Ladies and Gentlemen:* I was born and raised under a skylight, and Mr. Cramer's references to the old men in the photographic business at St. Louis years ago bring to my mind pleasant recollections of the past. It certainly is a pleasure to me to recall the time when the photographic business was worked under such trying conditions as wet plates and albumen paper, and I well remember the many difficulties encountered. We all remember the names of such men as Scholten, Fox, etc., connected with our art in years gone by, and also the connection of many photographers in St. Louis in the manufacture of dry-plates. If my memory serves me right, they were all located on South Broadway near and around Chouteau Avenue, then the central portion of our business district. Some of them have removed to the now central portion and others to the west end; possibly that is why I am a good Democrat, having remained in the southern portion of the city and continued my father's business after he established the Hammer Dry Plate Company.

It is quite different to-day, however, from what it was in the years of which I have just spoken, and photography is certainly in a deep, deep hole when pictures are made at twenty-five cents per dozen. Competition has brought this about, and I hate to call this art. I should like to make pictures that would be admired in years to come, when they would say, "This is my father, mother, sisters, etc.," and not, "They cost me one dollar per dozen." We have a great opportunity to elevate the picture business to a higher plane.

In our city, as you all know, we are to have a great World's Fair, the celebration of the Louisiana Purchase in 1803. What is the matter with putting up a building the exact counterpart of a modern photographic camera, say some two hundred feet in length, devoted entirely to photography, art galleries in which to display the product of the photographic world, halls in which all State and national conventions could meet; dark-rooms, dealers' displays—in one word, a home of photography for 1903. I believe the erection of a building of this kind with the best work obtainable would elevate photography in the eyes of all visitors and bring to them a realization and appreciation of the art.

We have some twenty thousand professional

photographers and their employés in the United States, and, together with the amateur, I believe enough money could be raised at the small sum of $2 per capita, for the next three years, to erect this magnificent building, that would always be a monument to the enterprise of our craft. The public would then realize that twenty-five cents per dozen is too little for good work, and sooner or later demand better work. I spoke of this movement at our last convention, and if my memory serves me right a committee of three was appointed to bring this matter before the National Association, but for some reason or other the committee failed to do so. I have nothing else to offer that would be of interest, except to say that the works displayed upon the walls of this convention hall are magnificent, and place Missouri in the front rank as a picture-producing State.

The meeting then adjourned until Thursday morning at 10 o'clock.

Second Day—First Session.

President: Under the regular order of business we have the reading of communications and discussion of by-laws.

Mr. Robertson read a letter from Mr. Rosch, of St. Louis.

Secretary: There is an important matter that I want to bring before the Convention; it is that of photographic copyright. I have a letter from Mr. John A. Tennant, of the Photographers' Copyright League of America. He asks me to read you the copyright resolutions presented to the National Convention, and with your permission I will do so. (This was done.) Now, I think it would be well for this Association to pass a resolution indorsing the action of the Copyright League, and, if necessary, to petition our Congressmen to do what they can for the furtherance of the matter in Congress. Mr. President, I move that we indorse it and prepare a letter to send to the members of Congress. Motion seconded and carried.

Next is the discussion of the By-laws. At the Convention held at St. Louis last summer the officers were authorized to suggest such changes as were necessary. Certain slight changes were then made.

Secretary: I have a letter from Mr. Frank Leffler, Secretary of the Texas Association, telling us that the disaster which befel Galveston has caused the Texas Convention to be held at Dallas instead of at Galveston. He sends us greeings from Texas, and hopes we shall have a very good time. I think it would be very proper for us to express our sympathy with Texas in her great loss. Moved and seconded that the Secretary be instructed to convey resolutions of sympathy to the Texas brethren. Carried.

President: The report of the Committee on Nomination is next in order.

The election of officers for the ensuing year was then taken up, and resulted as follows: *President*, F. M. Truby, of Booneville; *First Vice-President*, Mr. Marks, Clinton; *Second Vice-President*, Ira H. Latour; *Secretary*, Mr. Stone, of Warrensburg; and *Treasurer*, Mr. Stewart, of Carthage.

It was then decided that the officers of the Association should select a picture to represent the State in the Interstate Exhibit, and the meeting adjourned.

Third Day—First Session.

After the opening of the meeting Mr. Latour was persuaded to address the convention. He said in part:

Four years ago when I left you all so unexpectedly and rather unceremoniously, at Pertle Springs, I little thought I would ever have the pleasure of talking to you as a co-worker again. I well know when one addresses an assemblage of photographers he should dwell upon subjects nearest their hearts, and dilate upon the art of lighting and posing, chemical manipulation, color photography, retouching, and so forth. But I also know that to make real good art talk is not an easy thing to do. I would much prefer to take a negative or a positive side in a debating society when the question is up for discussion, "Whether a chicken that has been hatched out by an incubator can have any love for its mother, or whether it is better to raise a baby on a bottle or let it continue to board with its mother." (Laughter.) I can spell art, but I'm not worth a cent to talk it. Then, too, I don't want to appear selfish—"there are others;" and I don't want to give Brothers Thompson, Hammer, Robertson, and others a chance to say I tried to give the whole show myself. (Laughter.)

During the three years I was on the road theatrically (I don't want you to forget the business I was in) I made it a point to visit galleries whenever and wherever the opportunity presented itself, and met many with whom it was a pleasure to while an hour. It was quite interesting and gratifying, when far from home visiting a studio, to hear the same requests, identical whims, and caprices had to be catered to; in fact, the very language used "way down East" that I had been accustomed to "way out West," and I was then reminded of the story I had heard when quite a boy—that you find in this country at least—"about the same class of people everywhere you go."

I happened into a gallery in Holyoke, Mass., one afternoon, sat in the reception-room talking with the proprietor, when in came a tall, lank, young fellow. He looked around at the work on

exhibition, finally sauntered over to the counter where the reception-room lady was. He priced the work from the cheapest to the best—the figures seemed too high, the pictures not exactly to his liking. I heard him remark, "They are shaded too much to suit me." The lady bore with him very patiently, and after perhaps an half hour's forbearance, she asked him "if there was something they could do for him that day," when he curtly replied, he "guessed not; I jest come up to look over the place." The proprietor excused himself, called to his printer, who was at the other end of the gallery, and ordered him to bring forward the step ladder, the long one, which was accordingly done, when he invited Lanky to get up on it and "look over the place to his heart's content." The young fellaw took his departure, when Mr. Photographer said to me in rather an apologetic tone "that he always tried to be polite and courteous to his customers, but sometimes patience ceased to be a virtue," and cited me the story of the old farmer who was willing and anxious to divide the fruits of his experience with his young hopeful. "Joshua," he said, "always be perlite to everybody; recollect you're no millionaire, and can't afford to put on too many airs!" "Well, I don't know, father," rejoined the son, "there seems to be always a lot of fellows standing round only too willin' to impose on ye if you don't show some spunk!" "But you have to bear lots in this life, Joshua; it's work that counts. Think of the busy little bee; he jes keeps workin', day in and out, and they is mighty few bees, I's given to understand, as can't look in their lives with satisfaction and be pinted out to their neighbors as a success, and all because they keep a workin' and a workin'." "That's so, father; but there is one trait of character of the bee you hain't dwelled on." "What's that, Joshua?" "Why, he don't 'low nobody to sit on him." (Laughter.)

I went into the gallery in Biddeford, Maine (I mention the town to let you know how far I have been from home). (Laughter.) The operator had just made a sitting of an old Irish couple—I judge they were some sixty or seventy-five years of age. He told them they could see the proof the following day, when the old gent remarked in apparent glee, "This is the first time my wife ever had a picture took; we never could get her in the notion before." "Well, I am really glad" retorted the operator, "for when people arrive at the age of yourself and wife, it is a duty they owe, if not to themselves, to their children. I'm very much gratified, indeed, that you finally prevailed upon her to be photographed." "Yis, for the money there is in it to you," said she. "Go put on your bonnet," said the old man, and he turned to the operator saying: "Sure and her father died last week. We had no picture of him. Poor Dolan, to think he couldn't live to enjoy his life insurance! Well, we'll all have to die some day—if we live long enough." (Applause.)

I found an epidemic prevalent in the East that we have been sorely afflicted with in the West, *i. e.*, the man who tries to inveigle you, and often succeeds, into sending out "ticket agents," or adopt the "merchants coupon racket," and last of all, the fellow who wants to sell you some privilege or exclusive right that will make you rich in the twinkling of an eye, to hear him tell it.

In conclusion, I will very faintly dwell upon art, and offer you advice that varies somewhat from what you have been used to. Avoid naturalness in everything—that is to be gotten everywhere. Especially avoid it in picture making. People have a surfeit of it. They very properly want something besides nature if they are to pay for it. Nature they can get for nothing. Who cares for blue water? No one. But let the river turn a vermilion red, and everybody would rush to see it. We gaze upon the sun only when it is eclipsed. How many people would go out of their way to see two perfectly formed, handsome men? To illustrate: How many citizens of this thriving metropolis would go to see brother Ross and myself? (Applause.) None; but hundreds of thousands have paid good, kind dollars to see those pigmies, Tom Thumb and Commodore Nutt; and there you are. But do not become discouraged. If you make a family group and they all look like strangers to each other, it may not be your fault, just keep on trying. Always remember that the oftener a man fails the louder the applause when he finally succeeds. My parting injunction to you is, always carry out the promises you make, even if you are compelled to call out the moral force of the city in which you live, and do not hesitate to use that force, if emergency demands it, in protecting a tariff of the highest toned order, free from foreign restraints and home abuses. Make them understand you give value received for moneys paid, under all circumstances. We are, and must be, square-toed in all of our transactions, and exclaim in the language of the immortal Cæsar when he was attacked in front and rear in the snowy Alps, "Don't give up the ship." Don't let this jar you. Or like Romulus or Remus when milking the untamed wolf amid the Arabian desert, with the sun-burst of Ireland shining through the cabbage fields of dear old faderland, and the many colored rainbow extending from the polar to the torrid zone, inscribed thereon in letters of burnished gold, the motto: "We are the people and must be respected." (Applause.)

President: The next business is awarding of prizes. Mr. Secretary, please read the report of the judges. The Secretary then read as follows:

Herewith you will find our report as to awards given in the competition of photographs at this Convention.

Class A. 1st prize. Loving cup, Elias Goldensky, Philadelphia; 2d. Gold medal, A. T. Proctor, Huntington, W. Va.

Genre. 1st prize. Gold medal, Elias Goldensky; 2d. Silver medal, A. T. Proctor.

Class A. 1st prize. Gold medal, Henry Moore, of Kirksville; 2d. Silver medal, A. T. Stewart, Carthage; 3d. Certificate, C. S. Bishoff, Maryville.

Class B. 1st. Gold medal, A. S. Robertson, St. Louis; 2d. Silver medal, C. G. Anderson, Kansas City; 3d. Certificate Grand Studio, Kirksville.

Class C. 1st prize. Gold medal, O. L. Hutchings, Marshall; 2d. Silver medal, Alfred Larsen, Mexico; 3d. Certificate, A. Schlechten, Centralia.

Class D. 1st prize. Gold medal, Mrs. C. B. Reager, Salisbury; 2d. Silver medal, Miss Belle Johnson, Monroe City; 3d. Certificate, Thos. Stout, Unionville.

Landscape Class. 1st prize. Gold medal, E. J. Davison, Kansas City; 2d. Silver medal, Miss Belle Johnson, Monroe City.

Amateur Class. 1st prize. Gold medal, A. S. Ford, Kansas City; 2d. Certificate, R. H. Fuhrman, St. Louis.

A. H. CURTISS,
W. H. CASTOR,
C. T. POMEROY,
Judges.

President: By special request we would like to hear a few remarks from Mr. Smith.

Mr. Smith said in part:

I enjoyed the long talk we had a few moments ago. I learned something about the "push." Now, all along the street where I live there are little knobs on the screen doors which said "push," and there is where I supposed the word came from; but I have noticed that where they get in it takes a great deal of "pull" to get out. I believe in pull just as much as I do in push, especially in photography. I have often noticed that it takes a continual push and pull. If you push your way into the hearts of your customers, you have got to keep a pull to keep them there. I will tell a little story. Down in Boston, the other day, I went into a studio. A lady brought some pictures in, and laying them down said: "I don't like these." "Why," said the proprietor, "what is the trouble? you liked the proofs." "They are not the cards I ordered," she said. "But these are better cards than you ordered." "That isn't it; they are not the ones I asked for." And so it went on until she picked up her pictures and went out. He had lost his pull there. I don't believe I should have done business that way any more than the grocer should have treated Mrs. Jones as he did.

She was going to have company, and she sent her little girl to Mr. Brown for some brown sugar. The child brought back white sugar. The lady said: "I don't want white sugar, I want brown sugar," and sent the girl back. Mr. Brown was not there. The child said: "My mamma don't want white sugar, she wants brown sugar."

The clerk said: "We haven't got any brown sugar; the white sugar is better." So the little girl went back home. Her mother said: "You go and tell him that if he can't give you the brown sugar he must give back the money, and you go to Mr. White's grocery store and get brown sugar."

The clerk said: "Mr. Brown is not here, and I can't give the money back. I am only a clerk." At that, Mrs. Jones went over to the place herself and demanded it. She got it, and went over to Mr. White's and bought the brown sugar, and has been buying brown sugar from White ever since. That is the way with photographers. So many photographers don't take a journal. They read what they can get for nothing. Even a wagonmaker reads a journal. Each year you hear some photographer say: "I am going to subscribe for this or that," but he never does. There is just one thing; after you get a push and get started, try to get a pull and keep it. (Applause.)

President: Mr. Feld.

Mr. Feld: Mr. President, I think the ground has been pretty well covered by the two gentlemen. I think I recognized the photographer Mr. Smith mentioned. He is one of the best fellows that ever lived; but one thing that struck me very strongly last year was when Mr. ——— got up before the Association and said: "I hear you people talking about working. I have a place where I just enjoy myself all day and have a good time. It is a treat to me to be down there, and when my friends come in I enjoy myself with them." Now, that is the way that man talked of his work. It struck me that if there were more people in the world who made pleasure of their work it would be well for them. Now, that is a point for you to take home with you. Well, I have run down. (Applause.)

Mr. Robertson: I move that the thanks of the Association be extended to the retiring officers, the press, the photographic journals, and the people of Kansas City for their kindness in making the meeting a success.

Mr. Hammer: Before you vote upon that resolution I hope you will embody a vote of thanks to our worthy Secretary,

Mr. E. J. Davison. I think it will be well also to extend a vote of thanks to the Ives Kromskop Company for the most exquisite display of photographs in the natural colors, as shown by the Kromskop, and also to the International Color-Photo Company for the splendid display of the McDonough process, which they were good enough to send us. All these motions were unanimously carried.

President: If there is no further business the meeting will adjourn. Carried.

E. J. DAVISON,
Secretary.

INTENSIFICATION.

BY FRITZ HANSEN.

THE tendency of the present day is toward simplicity, and while much energy and ingenuity have been devoted to the simplification of apparatus, etc., the chemical side of photographic art has been to a certain extent neglected.

The modern developers which are from time to time brought out by the *Actien-Gesellschaft fur Anilin-Fabrikation* and others are of great value both to the professional and to the amateur, and are a step in the right direction, affording relief from previous complicated working by means of the ease and simplicity with which solutions are made, giving the operator the time and opportunity to take more pains with the artistic side of his profession.

Intensification belongs to one of those processes which have received scant attention during the course of the last few years. The improvement that can be effected on a weak, thin negative, or one without contrasts, which otherwise would have been destroyed, rendering valuable many plates otherwise useless, singles this process out for greater attention, as even the experienced operator does not always succeed in obtaining perfect negatives. The different modes of intensification are naturally of great importance, as with the use of dry plates the process has become more difficult than in the days of the wet process.

Ordinarily there are two methods employed, the most important being, as is well known, the mercury process, the silver image being first bleached out with a solution of bichloride of mercury. Then follows a long and tedious washing, and the bleached image has to be reblackened in various solutions, such as ammonia, silver cyanide, soda sulphite, etc., and then the plate has to be washed again. Besides being a complicated method, the process has the disadvantages of uncertainty of action, and the results are not always as permanent as could be desired.

Another favored formula for intensification is that of the uranium method, which can be done in one operation, but the red-brown color which the image assumes is not particularly stable, and it is impossible to judge the strength of the image, and although the plate may have been sufficiently intensified, after some time the color fades, and it is necessary to go all through the process again, besides which the solution has to be made up as required, being of very bad keeping properties and having to be used immediately.

An ideal intensifier should therefore be a liquid, preferably a concentrated solution, needing only diluting with water to be ready for immediate use. This want is supplied in the Agfa-Intensifier, introduced by the Actien-Gesellschaft.

Agfa-Intensifier keeps indefinitely, intensifies with only one manipulation, giving a gray-black color. A second blackening is quite unnecessary, as the image will obtain the right color at once without stains, blotches, or pinholes. It is only necessary to dilute the solution with 10 parts of water, and into this the negative to be intensified is immersed, the dish being rocked meanwhile. In this bath the plates remain until the desired degree of intensification is arrived at, which is easily judged by transmitted light. In two minutes intensification has commenced, and in a good many cases will prove sufficient. The maximum of intensification takes place within the first ten minutes, after which the image becomes gray-white, and becomes more or less reduced. Sufficient intensification being attained, the plate is to be washed for five to ten minutes and dried, these being the only after-operations necessary.

ON SPOTS AND SPOTTING.

BY A. LOCKETT.

SPOTS are the photographer's bugbear. Their varieties are many and perplexing, but are, of course, easily divided into two great families—namely, those devoting their attention to negatives, and the perhaps more annoying, because less remediable tribe, which help to disfigure our prints.

It is easy for the man who is never troubled with them to lift up immaculate hands and vow that they are one and all due to careless manipulation of some kind or other. Though there is certainly a good deal of truth in this dictum, it is not infallible, for many painfully careful workers are sometimes blessed by a visit from them in force, all precautions notwithstanding.

It may be useful for the purpose of their prevention or cure, as the case may be, to consider them in some detail. First, let us take our old familiar friend the pinhole. The theorist tells us this is due to dust settling on the film at some time or other before or during the period of development. If there is one philosophic saying that stands beyond a shadow of doubt it is that dust is matter in the wrong place. Well, we may keep our dark-room as clean as we like, and as free from draughts; we may dust our plates and our slides carefully, and even take precautions with the inside of the camera, and yet, maybe, it shall happen that when these plates were coated small particles of wickedness were watching their opportunity to settle, or, perhaps our brush is but a dust producer instead of destroyer. Be it so, we must do the best we can and rest content.

Now, what is the best way of dealing with these pinholes when they appear, as we may take for granted they certainly will, though, perhaps, we may prevent their being too obnoxious? Ordinary spots of this description may generally be filled in by a sharp-pointed pencil, retouching medium having, preferably, been first applied in the usual manner. It requires a little steadiness of hand to fill them in, right in the centre, so that they do not print, and this had better not be attempted after a social evening. Larger spots of the same description can only be treated in this manner, if they do not penetrate to the glass. In the latter case we must invest in a finely-pointed sable brush and one or two water colors. The best kind of brush to employ is a No. 2 red sable, as used for oil painting. This will, of course, have too long a handle, and needs to be cut shorter. Water color sables will not be found so stiff and springy, and are therefore not quite so satisfactory for our purpose.

The spotting may be done with various pigments, according to the character of the negative. It would certainly be the perfect way to try to match the color of the film, but this is, as a rule, quite impracticable.

It is our aim to prevent the clear spots on the negative from printing black, but it is not always possible to keep them from showing at all, since very often we must be content with replacing a dark spot by a white one, which in its turn can be removed in the print.

Of the colors employed, Indian ink is, perhaps, the most generally useful. Crimson lake and Prussian blue are very suitable for thin negatives where the ground to be matched is not very opaque. These two latter are best obtained in the moist state in pans. The crimson lake will be found to have a certain glutinous property that will often enable it to cover a small space of bare glass, where the other pigments would fail to adhere sufficiently.

The tints should be mixed on a porcelain slab, with, if desired, a little gum, which is said by some to be an improvement. The brush should be kept well pointed and sparingly charged with color, being, indeed, nearly dry, and the spotting being effected with a kind of stabbing or stippling motion, taking care to go only where the work is required, and not over the margins.

We shall always find ourselves confronted with a decided tendency to make our spotting unnecessarily opaque. This is due to the radiation of light making the spot appear larger and of more importance than it really is. To counteract that,

it is best to execute any work of this kind in a rather weak light. It will be noticed that many of the smaller pinholes on a negative do not visibly print at all, which is a hint to us not to be too fussy over their removal.

It is amusing, indeed, to see how some persevering individuals carefully fill in, perhaps hundreds of tiny spots on a negative, thereby laying up for themselves much trouble of the same kind over the prints, when, if they had only experimented, it would have turned out that, perhaps, but a dozen really needed covering.

For very dense negatives vermilion will sometimes be found the most suitable pigment, but is best avoided for ordinary work on account of its great opacity.

Occasionally our negatives are afflicted with beautifully circular clear patches, about as large as a pea, caused, we are told, by air-bubbles forming during development. These are rather troublesome to remove neatly, perhaps the best way being to apply a medium pencil over as much as we can, and, if necessary, varnish, and finish our work on this.

Black spots due to imperfect mixing of the developer, or some other deed of carelessness, can sometimes be removed by warily scraping with the point of a sharp penknife, or, better still, one of the small cutting nibs now sold for trimming prints.

With the removal of chemical stains and the remedying of scratches, cracks, etc., in the glass, we do not here propose to deal, since they not only do not strictly come within the scope of this article, but would require an undue allowance of space.

We will now consider the second great family of spots, those, namely, which enter an objectionable appearance on our prints. First of all comes the harmless and unavoidable white spot, which prints from our spotting on the negative. This is easily filled in with color mixed on a palette to the exact tint, and applied with our sable brush, which must be kept in an upright position and applied with a stippling motion as in spotting negatives, with the difference, however, that our work on the finished print should be quite invisible.

For the ordinary purple-toned silver or P. O. P. print a mixture of Indian ink and crimson lake may be used. A blue tone requires the addition of some indigo or cobalt. Bartolozzi red can be matched with vermilion and a faint trace of Indian ink, while a sepia tone can be suited by mixing sepia, Indian ink, and perhaps a very little crimson lake.

Platinotypes require a mixture of Indian ink and cobalt, varying in proportion according to the greater or lesser blueness of the print.

So much for legitimate spots on prints. Among others, which must be regarded in the light of blemishes, are the small round, black, or rusty-colored variety, which have a great fondness for P. O. P., though sometimes appearing on ordinary albumenized paper. These are generally caused by particles of iron or other chemical impurity in the water, and can often be avoided by tying a piece of cotton wool in a muslin bag over the tap in use. There is practically no remedy for them, though they can frequently be rendered less noticeable by the application of a little Chinese white.

Violet-colored spots and stains now and then appear on gelatino-chloride papers; they are of very doubtful origin, and as a rule beyond all cure.

Small yellow spots, caused by hypo, can sometimes be rendered invisible by spotting with a tint which, over the yellow, gives a compound coloring matching the print; one in which crimson predominates will probably have this effect. Larger stains of this description are mostly hopeless, but can in some cases be removed by gentle friction with a moist sponge.

Black spots on platinotypes, if not going right through, may often be scratched out so as not to show; for carbon prints, also, where they occasionally occur, the same treatment is generally satisfactory.

On bromide papers streaky lines and markings, due, it is supposed, to uneven development, may, if not too pronounced, be removed by rubbing cautiously with methylated spirit applied on a pad of cotton-wool—spots more deeply seated will yield as a rule to scratching, as before described; pumice powder will also often prove useful for the removal of various defects, and ink eraser has many good properties. We should see that the latter is of the very best quality, as the common variety often does more harm than good—indeed, it may be said that policy dictates

the purchase of all our spotting pigments and materials from a reliable source, as otherwise they will probably be not only lacking in permanency, but even liable to set up injurious chemical action in our prints.—*Photographic News.*

ENLARGEMENTS.

BY ROBERT MANTON.

THE question of enlargements is one of continual interest to all photographers; and as professional workers are more and more awaking to pictorial possibilities outside the studio, it is one which may reasonably be discussed in these pages. The point to be dealt with at present is whether a small negative should be taken and enlarged from, or whether enlargements should be avoided and large negatives taken direct.

At first sight the evidence is overwhelmingly in favor of as much work as possible being done with a small camera. Indeed, but for that unfortunate question of "grain" the small negatives would be the only choice. The first advantage of a small camera is cost. A dozen plates 4 x 5 cost sixty-five cents; a dozen plates 12 x 15 are an expensive item. We may use a dozen plates to obtain one satisfactory picture, and the saving on this is a considerable item. But the great value of the small camera is its portability. A day with a small camera is a holiday; a day with a large one is slave work. But in addition to this gain in portability come the optical advantages. Everyone knows that with the same angular aperture there is much greater "depth of focus" with a lens of short focus, such as is used with a small camera, than with the long focus lenses necessary with large cameras; but what is not so generally recognized is that, even if the negative made with the small camera be enlarged to the size of that by the large one—focal lengths bearing the same relation to the sizes of the plates, and angular apertures being the same—the enlargement will show much more "depth of focus" than the direct photograph.

It would almost seem as though the case were proved in favor of the small camera, and if only *slow* plates could be used the small camera would certainly triumph. But we want to use the most rapid of plates, for we do not utilize nearly all the advantages of a small camera unless we use it as a hand camera. Now, exposure with a camera held in the hand necessitates rapid shutter work, especially when enlargements are to be made from the negatives, as a very slight angular motion produces blurring.

This brings before us the uncomfortable fact that the more rapid a plate is the coarser is its grain. The old wet-plate was practically grainless, but its slowness would be appalling to a worker of to-day. The slow dry-plate is coarse-grained when compared with a wet-plate, but it is fine when placed in competition with a rapid plate. Some day somebody may get out a plate which is rapid yet without grain, and whoever does so will scoop the market.

A very exasperating point is that if we made a large negative direct it would stand enlargement without hurt, but we can't enlarge our small one. The reason is simple. We enlarge a picture twelve inches across, three diameters. This gives a picture a yard broad, and we must hang it on a wall and step away from it in order to see it. But if we enlarge a four-inch print to twelve inches we at once want to hold the enlargement in our hands and examine it closely.

For many subjects, such as marines, where fairly slow plates may be used, the making of a small negative is undoubtedly the best way. For other subjects either a large direct negative should be made, or the small camera placed on a tripod and a time exposure given.

Unless a picture is required of an ultra-impressionistic style, the large camera and direct negative will remain an essential part of the landscape photographer's outfit.

Mosaics for 1901 will have more illustrations and more good reading than ever before. We have enlarged the edition, but the orders are also coming in in greater numbers than ever. So order early to avoid disappointment.

TEXTILE DESIGNS BY PHOTOGRAPHIC METHODS.[1]

THE preparation of designs for the loom has, throughout the history of weaving, been regarded as a purely manual process, controlled by the intelligence, ingenuity, and skill of the craftsman. It is only natural, therefore, that the invention of apparatus for this specific purpose should have created much interest among both British and foreign textile experts. Photography, as understood and practised, appeared as incapable of aiding the artist in the actual painting of his picture as the designer in the transference and execution of the plain sketch of the pattern on to the "scale" paper for the loom. Within the wide range of technical and scientific data in the construction and embellishment of woven fabrics there is, perhaps, no phase of the work more difficult to assail by mechanical devices than the application and adjustment of the manifold "weave" units which compose all figured textiles.

Design acquired in the loom is a distinct type of ornamentation involved in varied technicalities. It is not the result of one but of a number of processes overlapping each other, and yet uniting to construct and perfect the same woven effect. Fabric and design have to be simultaneously obtained. These can only be divorced by resorting to the arts of printing, embroidery, and painting. Obviously in the preparation of the "design" sketch for weaving, numerous limitations have to be encountered, which, on a first consideration, seem liable to be increased rather than diminished by a photographic process of design development. Much ingenuity has been exercised by Szczepanik in his solution of these "weave" problems. Szczepanik's apparatus is not for the origination of designs, either in the theoretical or technical form, for in both processes the knowledge of the expert is demanded; but its province is to lessen, and, in some instances, dispense with the monotonous manual labor necessitated by the present system. There are large areas of point paper in elaborate designs to which the same weave effect has to be applied, and where some labor-saving device is much needed. Further, in the enlargement of the artist's sketch to scale there is much mechanical work that it ought to be possible to reduce. The photographic inventions of Szczepanik profess to accomplish these objects, and the designs submitted prove that there are possibilities of success in certain styles of pattern. A new field for experiment has been discovered, the extent of which it is not possible to forecast, but it may reasonably be anticipated that the genius and temerity of the discoverer will prove equal to its more complete exploration.

The essential purpose of Szczepanik's invention is to develop from the ordinary sketch and enlarge to a prescribed scale the technically prepared design, marked with the thousands, or may be millions, of dots grouped in different orders and so fitted together as to impart precise definition to the several portions of the woven figure or design. The process is threefold, consisting (1) of the preparation of the ruled paper; (2) the development of the design from an ordinary photographic negative; and (3) the application of the weave units to the several parts of the figure. Primarily the apparatus consists of an optical lantern with a suitable arrangement of lenses. One important factor is the "raster" or multiplying plate, containing some 435,600 perforations, through each of which the weave type passes, and is printed on the enlarged design. In addition there are weave-plates for determining the details of the pattern, and small metal slides for producing particular sections in distinct forms of type, so that they may be as readily distinguished from each other as if sketched in various colors.

The light from the lantern passes through the negative of the design, entering a pair of lenses, between which is fixed the small metal plate of the proper shape for developing the marks on the sensitized paper. The process consists in dividing and subdividing the "scale" pattern into rectangular spaces, and of marking each with the correct weave type. When there is no negative in the lantern this type is repeated as many times as there are holes in

[1] Abstract of a paper by Professor Beaumont, from the "Journal of the Society of Arts."

the perforated plate, showing the feasibility of marking every square photographically on any kind of weaver's paper.

In the first place the negative is made of the complete design, and all parts erased but the ground sections, allowing of these being printed with their supplementary weave elements. Negatives of every part of the pattern are similarly printed in succession until the entire design has been obtained. For the production of shaded work—*e. g.*, portraits and pictorial subjects, selected plates are employed. These secure an accurate graduation of tones perfectly in harmony with the photograph from which they are derived. Provision is made for the execution of patterns in compound as well as in single structure fabrics; but it follows, the more complex the build of the texture, the more intricate the process of design production. Certain textile designs may evidently be produced photographically by the Szczepanik system, so that it is now a question for demonstration whether designs so produced are comparable in legibility and equal for all practical purposes—as forcible in detail as vital in execution—as those prepared by the much slower hand method. May the answer be affirmative!

SOME NOTES ON TONING.

BY T. THORNE BAKER.

A FEW weeks ago I had the opportunity of watching a photographer of no small repute carry out his toning operations. On asking what bath he used, he said: "I just fill the dish with water, throw in as much borax as will lie on a sixpence, and then add a few drops of gold." Needless to say, his talents lie in artistic, not scientific work.

One of the most frequent troubles the novice first experiences is undoubtedly toning, the result often being that he uses the "combined bath," only to find his cherished photos fade sooner or later—generally sooner. The chief complaints made against separate baths are (1) the possibility of double tones, and (2) that the prints sometimes turn yellow and remain so. Such obstacles may easily be removed by exercising a little care. Double tones may be prevented by soaking the prints in a 10 per cent. solution of common salt before the preliminary washing, and by not touching the films with the fingers; and the second objection could not be raised, provided fresh solution was used, with no excess of sulphocyanide, if this be the bath adopted.

Although it is agreed upon generally that the sulphocyanide bath gives the most excellent results, there are a great many others which are far more easily manipulated. For instance, the gentleman above mentioned, no matter how unscientific his methods may be, has never known a double tone; and besides the borax bath there are several others which may be used with advantage.

A very satisfactory solution may be made as follows:

Sodium Phosphate, . . .	20 grains.
Gold Chloride, ...	1½ "
Distiiled (or boiled) water, .	10 ounces.

This tones very quickly and evenly, and the print will be, when fixed, exactly the color it is when removed from the bath. Good chocolate tints may be obtained turning to purple-gray on prolonged immersion.

Next to this, as regards ease of manipulation, the tungstate bath may be placed, the following being a good formula:

Sodium Tungstate, . .	40 grains.
Gold Chloride, . . .	2 "
Water, ...	12 ounces.

The prints should be toned a little further than required, as they change color, though only slightly, in the hypo.

Provided that ordinary care be exercised the sulphocyanide bath cannot well be improved upon. The formulæ given by the various makers for their respective papers are all satisfactory and differ very little. One which I have always found to act well is:

Ammonium Sulphocyanide, .	28 grains.
Distilled Water, . . .	16 ounces.
Gold Chloride, . . .	2½ grains.

For those who care to try the various baths, and to compare their results (which,

by the way, is well worth doing), I give below a table showing the quantities of different agents that may be used with sufficient water to make up ten ounces.

We may take it that any of these substances reduce gold tri-chloride, $AuCl_3$ to AuCl; this AuCl apparently acts as an electrolyte, from which gold is deposited on the silver of the image, and at the same time a small quantity of silver combines with the chlorine of the gold chloride thus:

$$AuCl + Ag = AgCl + Au.$$

When toning has been completed the prints are washed and placed in the fixing bath, when the sodium thiosulphate present dissolves any silver chloride that has not been affected by light.

Gold chloride 1 gr. to 1 oz. water	Dr. 12	Dr. 16	Dr. 16	Dr. 11	Dr. 11	Dr. 14
Borax	Gr. 60					
Sod. bicarbonate	...	Gr. 10				
Sod. carbonate	...	...	Gr. 20			
Sod. phosphate	...	...	...	Gr. 20		
Sod. tungstate	...	...	...	...	Gr. 40	
Ammon. sulphocyanide	...	...	...	...	...	Gr. 17 5

Besides the well-known, everyday tones we see, which never outstep the narrow range between chocolate-brown and purple, a practically infinite variety of color, from chalk-red to black, may be obtained by a little careful study of toning baths, instead of regarding them as mere unalterable machines. Most charming tints are produced with platinum baths, a good formula being:

Strong Nitric Acid,	5 drops.
Water,	4 ounces.
Chloro-platinate of Potassium,	1 grain.

The final tone of a print cannot be judged from its appearance in the bath, but some idea of it may be got by holding it up to the light and looking through it. A short immersion gives various reds, whilst prolonged toning gives soft grays.

Results very similar to platinotype may be obtained with the following combined gold and platinum bath:

A.—Sodium Acetate,	1 drachm.
Water,	4 ounces.
Gold Chloride,	1 grain.
B.—Chloro-platinite of Potassium,	1 grain.
Water,	4 ounces.

Mix A and B and neutralize with nitric acid. (The solution will be neutral when it just ceases to turn red litmus paper blue.)

Another toning agent is stannous chloride. Two or three grains of tin-foil are dissolved in strong hydrochloric acid with the aid of heat. The whole is then made up to about 4 ounces with water. I have some prints toned with tin over two years old, which so far show no signs of fading or discoloration.

Much as the combined toning and fixing bath is to be condemned, it may yet be safely used, provided that very great care be exercised in the final washing. But the little trouble it saves is certainly not worth the risk of fading it necessarily involves. A combined bath without gold is as follows:

Lead Acetate,	20 grains.
Hypo,	1 ounce.
Water,	10 ounces.

In this the lead takes the place of gold, and, therefore, the results are not permanent.—*The Amateur Photographer.*

THE CONVENTION A SUCCESS.

BY W. F. SCHREIBER.

THE National Convention of 1900 was a success.

There were many beautiful specimens of our art on exhibition—works of which the makers may with justice feel proud.

There were also, as there must ever be, many poor pictures which carried our minds back to the past, to the days of aggressive, accessory and loud background. How those carved chairs and palms do stay by us. Is it because the photographer paid a goodly sum for them in the beginning? If so, I can sympathize with his reluctance to part with them.

How is it possible to love and live with a picture in which the accessories crowd

upon and detract from the central object. When I see these crowded pictures I think of one trying to make love to a young lady in a room with the whole family around.

The feature in a picture of which we never tire is simplicity, and a deviation from this is usually to be condemned when a picture is intended for the convention exhibit.

A picture made for a customer must be a good likeness, and it may please through that likeness. The picture sent to the convention has not this aid to success. The photographers and the judges there do not know the original, and the picture must have other merits. It must bring forth the beauty, the character, the individual peculiarities of the sitter.

Never be content to send for exhibition a picture selected from the usual run of work, unless it is a picture of unusual merit. Never, in brief, exhibit a picture in which wider considerations have had to be sacrificed to the factor of likeness.

In choosing a portrait, say of a lady, let it not be a "likeness of Mrs X," but a typical representation of the American woman at her best. Let it have that dignity of carriage, combined with gracefulness, for which she is so universally known; or let it have some other equally typical characteristic.

Never attempt an exhibition picture by using a strange model; it is a common feeling with all able photographers that they would like to try again, as they become more familiar with some sitter. New attitudes are seen, and faults are seen in the picture made on a first meeting.

The feature which tells all is the eye. A picture in which the eye is the centre of interest is often a strong and successful picture. The eye is the window and conductor of the brain—and of the soul. How the eye can flash to threaten or to defy. How it can melt and soften with deep sympathy and kindness. A single ray from it may fill a heart with joy. The eye speaks a universal language; it is the same in all countries and it waits no introduction. The language of the eyes is to the student of human nature often more forceful than the language of the tongue.

RIPENING EMULSIONS.

WHAT is the theory of ripening? E. J. Wall, quoting from Dr. R. Luther, answers this question. He suggests that when a silver nitrate and gelatine solution is added to a solution of a bromide in gelatine at a low temperature, and both the solutions being very weak, an almost transparent emulsion is formed which is very slow, *because nearly the whole of the incident light passes through.* If, however, stronger solutions are used, or a higher temperature, then a much more opaque emulsion is formed, which is more sensitive because the grains of silver haloid stop the passage or absorb the incident light, and when light is absorbed or extinguished it must be converted into work of some kind. If such a slow emulsion be heated the grains of silver bromide, which have a mean size of 0.0008 millimetres $= \frac{1}{31250}$ of an inch, increase in size, probably by agglomeration, and, being larger, they are more opaque and stop more light, and are therefore quicker. If the emulsion is heated still more the grains become still larger and are easily seen by the naked eye, and are then reduced by a developer without the action of light. Eder states that "with silver bromide the chemical reducibility as well as the decomposition by light is increased and rendered more easy with the increase of its density." The above reasoning does not take into account the sensitizing action of gelatine, which, being a greedy absorbent of bromine, allows the silver salt—which we may assume to be brought into a state of unstable equilibrium by "cooking" or "ripening"—to part more readily with part of its bromine, and thus silver subbromide is formed, which is more readily reduced by the developer. Were silver bromide acted on by light and split up into silver sub-bromide and bromine in the presence of a non-absorbent of bromine, or actually in the presence of bromine, it would be very slow. This is why a pure silver bromide emulsion in collodion, which is not a bromine absorbent, is almost insensitive to light, and why, in the wet-plate process, free silver nitrate is left on the film.

"PHOTOGRAPHIC MOSAICS, 1901."

A YEAR-BOOK OF PROFESSIONAL PHOTOGRAPHY.

A NEW volume of *Mosaics* is almost ready for delivery. Identical with the *Mosaics* of past years in its essential features, the new volume shows so many changes and improvements that its old friends will hardly recognize it at a first glance.

The practical photographer has his own ideas about a professional year-book. He wearies of the pictorial fads and crude notions which overburden the annuals made to sell to amateurs, and judges of the value of a book by its usefulness to him in his daily work *Mosaics* has always provided for these needs in a more direct way than any other annual, and the proudest boast of the little book is that it is "the favorite annual of American photographers" This year *Mosaics* meets the needs of the practical photographer more closely than ever before, presenting on every page something of direct interest and usefulness to those to whom photography is a serious pursuit rather than a mere hobby for leisure hours.

In *Mosaics* 1901, the photographer has a picture gallery, displaying in convenient form nearly one hundred representative examples of the best professional portraiture of the year. The man who would enjoy seeing what Falk, Core, Strauss, Schumacher, Steckel, Taber, Pierce, Hollinger, Gutekunst, Somers, Place and other prominent workers are doing can find in *Mosaics* examples of their work for study and comparison, chosen by the photographers themselves from their year's output. The prize winners from the conventions of 1900, Goldensky, Homeier & Clark, Knaffl Bros., Brenner, Moore & Stephenson, Giffin, Curtis, Louis, and W. F. Schreiber, Jackson, of Tacoma, Hall, of Buffalo, and others, have sent picked work from their exhibits. Photographers of note whose work is now rarely reproduced, such as Dudley Hoyt, Alfred Holden, Pirie MacDonald, C. A. Zimmerman, Chas. P. Marshall, and I. Benjamin, have favored *Mosaics* readers with portraits which will repay the most careful study. And there are fifty others, equally interesting, all skilfully engraved and printed so as to show the best qualities of the work. It is an unusually good collection, full of suggestions and ideas for the progressive worker, and a collection which does credit to American photography.

The practical papers in *Mosaics* 1901, have been prepared with especial care—written for *Mosaics* only, and dealing with subjects chosen by the editor for their interest to the professional worker. Thus a lengthy article (illustrated) deals with "Studio Construction;" Mr. Henry Troth contributes a complete monograph on "Platinotype Printing for Professionals;" Mr. Edward W. Newcomb gives an equally complete guide to "Carbon Printing for Professionals." A useful paper on "Plain Silver Paper Printing" is contributed by Dr. John Nicol, and Mr. John A. Tennant writes concerning "Portraiture from an Everyday Point of View." T. Perkins gives a suggestive paper on "Outdoor Portraiture," with many useful hints, and Mrs. Ward sends an account of her experiences in "Indexing Negatives." A special feature of these papers is their completeness; they are not the average "annual" article written "in the spare moments to oblige the editor," but well thought out and practical chapters on their several subjects.

Then there is the editor's yearly "Review of the Progress of Photography," embodying, as usual, the most useful hints, methods, and formulæ of the year's work.

Mosaics is not merely a book for a quiet half hour. The pictures should be *studied*, and what is written should be read with care. Such care will be well repaid.

The book appears in a new dress, new type, better paper, and new covers. It is a book which will give help as well as pleasure during the busy year to come, and we would like *all* our readers to possess it for themselves. *Mosaics* may be obtained from all dealers, or from the office of this MAGAZINE, at the old price: paper covers, 50 cents; library edition, $1. The advance demand for copies has already taken up over half the edition, and early orders are advised to prevent disappointment.

EDITOR'S TABLE

C. P. GOERZ has from time to time shown many fine bits of work done with a Goerz lens, but nothing finer in its way than an enlargement, 15 x 31 inches, from a 5 x 7 negative, showing a group of horsemen leaping a wall. The photograph was taken in a Goerz-Anschutz camera fitted with a Goerz Double Anastigmat, Series III., and the sharpness of detail and the lack of black shadows are a tribute alike to the wonderful definition of the lens and to its extreme rapidity.

FROM the SUFFOLK ENGRAVING AND ELECTROTYPING CO., Boston, we have received a sample sheet of their work in three colors. The samples show a wide range of work from purely commercial reproduction to the rendering of fine paintings. The strong popular coloring of the former contrasts with delicate handling for the more artistic subjects, and show much care and skill in controlling the process to the needs of any particular subject.

MR. D. BANGS, Sleepy Eye, Minn., sends us a few specimens of his recent work in portraiture. These show thought and care in lighting and arrangement, together with good technical qualities.

THE IVES KROMSKOP will in the future be on exhibition in New York City, at 18 West 33d St. Mr. BURR MCINTOSH will look after the interests of the company, and will always be pleased to meet any who wish to further investigate the Kromskop.

THE LOVELL DRY PLATE CO. send us particulars of their new backed plates. The demand for plates with non-halation properties is a growing one, and one that will grow more rapidly as photographers become better informed. Their use is by no means confined to "test" subjects, for there are few occasions on which a backed plate is not preferable, and none in which it is worse than the unbacked plates. In giving us this non-halation plate the LOVELL DRY PLATE CO. have added a new and very practical aid to the photographer.

A NEW COLLEGE OF PHOTOGRAPHY is announced from St. Louis, Mo. Messrs. F. W. GUERIN and FELIX RAYMER are the proprietors of the venture, and, assisted by a capable staff of assistants, they intend to teach photography from start to finish. Mr. GUERIN'S name is a household word among the profession, and Mr. RAYMER has become widely known during his connection with the Illinois School of Photography. The combination is a strong one and should achieve a solid success.

LUXO.—It is interesting to see how much more than formerly photographers are using artificial light in their work. For interiors, for groups, and commercial work the use of flashlight of one form or another has become a matter of common practice. Among the many powders available for this class of work we know of none better than the old and famous Luxo, of which W. P. BUCHANAN, of Philadelphia, is the wholesale agent. Luxo has been tried by the test of years, and has proved a desirable as well as an efficient helper. A photographer who needs "more light" will do well to send to Mr. BUCHANAN for full information concerning this best of flashlights.

A CORRECTION.—We regret that by a clerical blunder the names of Mr. CHARLES W. HEARN, of Boston, and Mr. J. C. STRAUSS, of St. Louis, were omitted from the published list of those whose work was admitted to the *Salon* at the New England Convention. In a later issue we hope to present examples from the splendid exhibits these gentlemen made.

The Photographic Times has our congratulations on the return of Mr. W. E. WOODBURY to the editorial chair, which he vacated more than a year ago, to join the NEPERA CHEMICAL CO. During Mr. WOODBURY'S absence our contemporary was of somewhat fluctuating value, though for the last few months it has regained much lost ground under the able control of Mr. JUAN C. ABEL. Owing to ill-health, due partly to overwork, Mr. ABEL has felt compelled to resign his position, and will, we understand, after a brief holiday for rest and recuperation, be interested in another phase of work. Mr. WOODBURY contemplates some innovations in the magazine, which will be altogether on the lines of improvement.

The Photo-Minature, No. 18, deals with "Chemical Notions for Photographers," and, as an A B C of "what happens," should be read by all who have any interest in the mysteries of photographic manipulation. The monograph is from the pen of THOMAS BOLAS, and fully sustains his reputation as a sound, careful writer. (TENNANT & WARD, 289 Fourth Ave., New York.)

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DEVOTED TO PHOTOGRAPHY, MONTHLY: ILLUSTRATED.

SOME AMERICAN STUDIOS 521
NOTES ON PORTRAITURE. By Robert Melville 524
COLLODIO-CHLORIDE EMULSION. By C. T. Sutton 526
THE AGFA REDUCER. By C. H. Bothamley, F.I.C., F.C.S. 531
PORTRAITURE AT THE PHILADELPHIA SALON. By Wm. Edward Ward . 532
PHOTOGRAPHIC MOSAICS, 1901 534
NOTES AND NEWS 535
A PROTEST 537
A REMINISCENCE. By Jas. P. Ryder 539
A RAY FILTER COMPETITION 540
GRAY'S DOUBLE STIGMAT 541
FLOWERS AND FRUITS 542
THE INTENSIFICATION AND AFTER-TREATMENT OF CARBON-PRINTS. By Ernest Human 545
THE TIME OF SNOW 548
PRACTICAL METHODS AND FORMULÆ 549
EDITOR'S TABLE 551

OUR PICTURES:

"A Breath of Fresh Air." Engraved from a Carbon print by William Gill, Colchester, England.

A Series of Portraits by Louis Schreiber, Schloss, Dudley Hoyt, F. W. Guerin, B. F. Puffer and others.

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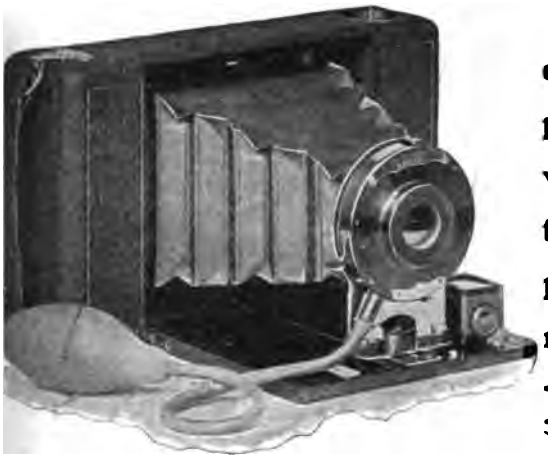

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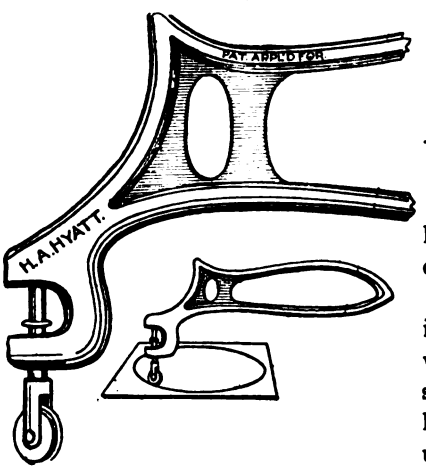

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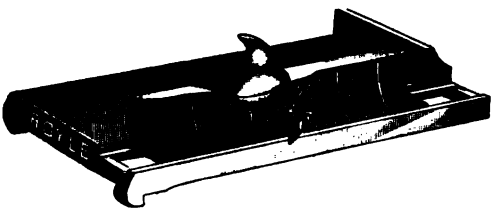

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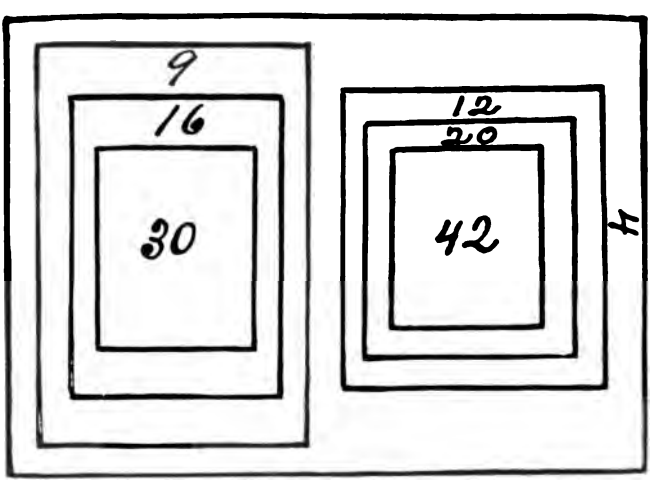

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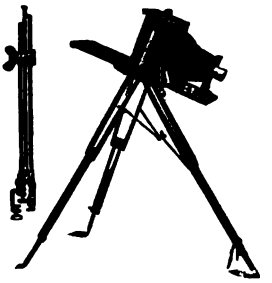

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EDITED BY EDWARD L. WILSON.

VOL. XXXVII. DECEMBER, 1900. No. 528.

SOME AMERICAN STUDIOS.

DURING the photographically quiet months of the summer we have many pleasant visits from our friends in different parts of the country. The convention gives the fraternity a shake-up; and when some hundreds of photographers leave their homes in search of change and knowledge, many of them are sure to reach New York before they return to their work. During the past summer we had the pleasure of a visit from Mr. Frank G. Schumacher, who brought glowing reports of prosperity from California. He now sends us from his Western home a few interesting notes of the men and places he has seen on his journey across the continent. Mr. Schumacher has made a golden use of his journey in visiting the studios of his many friends; and he lets us all share his experiences. The dominant notes which run through Mr. Schumacher's article are the almost universal prosperity which is attending his friends, and the strong way in which many young men are forging ahead through sheer merit.—ED. W. P. M.

Concerning my trip East, during which I visited many studios, I find that work in general is of a better grade than, and shows a marked improvement over, that which I saw during my previous visit in 1898.

One has but to glance at the many fine things that were in evidence at the Milwaukee and Ohio and Michigan Conventions to be convinced of this fact. The photographer of to-day is ever striving for something new and different; something out of the ordinary, and to avoid as much as possible the stereotyped mechanical photograph with the figured background and gaudy scenery, which seems now to be a thing of the past—at least with most of the leaders of the profession. While in Milwaukee, after carefully studying the convention pictures, I visited the justly celebrated Stein studio and saw some of the fine things, by producing which Mr. Stein has made himself famous. Klein & Gutenstein are another firm, with a model place fitted with everything that is most up to date, and coming rapidly forward in the profession.

After the convention I went to Pittsburg, deferring any long stay in Chicago until my return from the East. In Pittsburg I met that clever young artist Rosser, happy in a model studio, and producing work which ranks among the best. On my previous visit I had a cordial reception from the veteran Dabbs, and feel, with many others, that we have lost a good man and true friend since 1898. I paid a visit to the old gallery, and there found the business in the able hands of my friend Diehl, who was turning out a high grade of good, clean work. Another friend from the Dabbs studio is Mr. Spicer, who, after twenty years with Mr. Dabbs, has crossed the river into Allegheny, and has just completed the fitting of a new studio. All events point to his claiming for himself a well-deserving success. From Pittsburg to Philadelphia was my next stage. Unfortunately for me, Philadelphia was taking a well-earned holiday; her photographers were in the country or at the shore on their vacations, and I had at too many studios to be content with a mere examination of specimens. The Phillips studio was undergoing repairs, but I was able to see some of the most recent work, which fully maintains its best traditions.

The new Hemperley studio, but just opened, is a unique establishment, and will certainly score a success. At the Gilbert & Bacon studio I met the manager, Mr. McIntyre. Miniatures on porcelain, of good quality, seem a profitable specialty of theirs.

From Milwaukee I brought very pleasant memories of many kind courtesies shown me by two gentlemen of Philadelphia, Mr. W. E. Buehler and Mr. Goldensky. Mr. Buehler is at the Gilbert & Bacon studio in Columbia Avenue. Both his and Mr. Goldensky's work is excellent in quality, and with that peculiar style by which so many photographers can stamp work as their own. It is a style which will draw the customer to the studio. The Goldensky studio, indeed, is situated in the heart of the wholesale district—the last place where one would expect to catch the aristocrats; but they come. It is a wonderful showing of the reward which awaits business energy allied to sound skill, and very much credit is due to Mr. Goldensky as one of the most successful of our young men. Five years ago operating was practically a sealed book to him.

Harris and Cook are distinctly of the new, and both work and work-rooms differ from the ordinary. Their favorite picture is the mercury-toned platinum. The difference of this work was emphasized by my next visit, for I could not leave Philadelphia without paying a visit to one of the fathers of American professional photography. Calling on Gutekunst, I found the old school in its best and most typical sense. The same old studio, the same old cases and albums, filled with types of the old school. And when I look at some of these fine heads—14 x 17—heads of Booth, Barrett, and many other celebrities, I see work which, with all our vaunted improvements in material and education, we have been unable to improve upon.

Philadelphia is close neighbor to New York, and in this latter city I spent ten days—none too long a time in which to visit my many friends. Making first for Fifth Avenue, I came across the Appleton studio. Last time I met Mr. Appleton was in Dayton, Ohio; now, like many others, he has felt that to successfully work a specialty one must be where the people most congregate, and he has just fitted this new studio for the portraiture of women only. With his own peculiar specialty, Appleton will doubtless make a hit.

Close to Appleton I found friend Schloss contented and prosperous, for business has flowed strong toward him. My friend Core has moved further up the avenue, and to him I went next, learning on the way that Hollinger was out of town. Mr. Core's new studio is much larger and better equipped than the one in which I met him in 1898, and his work—but everybody knows Core's beautiful work, and so I will say no more about it.

At Davis & Sanford's I found things in the midst of renovation. Their success during the last eight or nine years has been phenomenal, and they intend to continue it in a studio which will be a model one when the workmen are out and fall work commences. In the new Anderson studio I was much interested in the five large combination groups which I saw there, and which are a strong specialty of this veteran worker. Close to the Anderson studio is that of Sarony—for the business is still conducted under that great and familiar name. Again, only a few doors away Rose & Sands have a beautiful and newly completed place—a "branch" from Providence. I found here Mr. Sands in charge, and the work worthy of the past reputation of the firm. The studio has two lights, one being more especially for theatrical work. Crossing over to the Dana studio, in Broadway, I was sorry to find that Percy King was away on his vacation, but I was very courteously received by Mr. Messer, the manager, and from him learned the common story that business was flourishing and they receiving a full share of the trade. I could not leave New York without seeing some of the productions of two of its prominent lady artists, of whose work so much has of late been said—Miss Ben Yusuf and Mrs. Käsebier. As both ladies were away from town, I visited the rooms of the Camera Club, and there was able to inspect several examples of this very peculiar and interesting style of work. Some of it was very fine, and for a certain class of subjects it will do nicely; but I do not see that it can ever become popular for the general run of work.

Last, but by no means least, I found my way to the Falk studio. My friend Powers, who is connected with this establishment, had given me the most suitable hour for

a call, and following his advice I found Mr. Falk at liberty. The Falk gallery is a revelation. I have visited almost every prominent gallery both in this country and Europe, and this one certainly surpasses them all. Who would not wish success to a man with the enterprise and energy to attempt such an undertaking—but we all know Falk, and that he cannot be other than successful.

There were many other places which I much wished to visit, but ten days is but a short time to spend in the metropolis, and as I sped north to Albany I felt that much had been left unseen. MacDonald was away, but at the Albany Art Union I had the pleasure of a few moments with Mr. Rogers, who showed me some very fine work before I had to rush to my West-bound train. My next stop was Rochester, where I called on Dudley Hoyt. His studio is rather a small, compact little place, well equipped, and tastefully arranged on the residence plan. The walls are adorned with some very clever work, showing that Mr. Hoyt is another of those able young men whose work is always advancing. I also called on Mock and on Saunders, and found them both doing well. At the Mock studio I saw some fine examples of gum-bichromate, a special modification of which Mr. Mock has made his own.

From Rochester I made a visit to Syracuse in order to shake hands with Dinturff. I have seen and heard so much of Dinturff and his work in WILSON'S MAGAZINE and elsewhere that I was not at all surprised to find him a royal good fellow. His work is eminently characteristic of the man, and I was doubly repaid for my visit by what I heard and saw. At the Ryder gallery I was kindly received by the operator in the absence of Mr. Ryder, and then sped on to Buffalo.

Here I hunted up my friend Nussbaumer and ran across a nest of good fellows, for here I met, too, Mr. Wm. Paul, and Kirshner of the Carl Ernst Co. These three gentlemen royally took me in tow, and during the day I reached only one more studio. This was the beautiful residence studio of Mr. Hall, one that I had long wanted to visit, not only to inspect the studio but also to meet the man and to see his very fine work. I was successful in each desire, and in each I found the reality to surpass my expectations.

I had faithfully promised my friend Botham that Put-in-Bay would see me, and my stay in Buffalo was ruthlessly cut short that I might catch the boat West. At the Ohio-Michigan I found many fine works and much sign of prosperity, and the convention was most interesting and most successful. From here I travelled to Cleveland in genial company, for Moore and Moses from the South, with Rosser and Giffin and myself, elected to travel in a party. At Cleveland Geo. Edmondson was responsible for our having a royal time. Not the least interesting thing in Cleveland was his studio, where he is making both a name and a solid business for himself, and where he handles many interesting specialties. T. R. Bill, too, who is specializing on carbon work, is doing a fine business.

In Detroit I caught friend Hayes, genial as ever, doing, as usual, work right on the handle and well in line with the rest of them. Arthur was another holiday seeker, but I was well taken in charge by his operator. This studio differs from most others inasmuch as the office, or business part of it is on the ground floor, with all the other rooms on the top of the building, but all very conveniently arranged. I could not see either Huntington or Clark, but saw some very fine carbon work in their rooms.

I found Spellman still as young and as successful as ever, doing a fine business and fine work. Particularly beautiful, I thought, were his small 5 x 8 panel carbons on rough etching paper. Detroit is certainly a wonderful art centre, and our profession is well represented by men clever alike on the art and business ends of photography.

Reaching Chicago, I at once called, in company with Mr. Spellman, who had come over from Detroit, on Mr. Steffins. Everybody knows the name of this justly celebrated master of the profession, and many fortunate ones have seen his work. Mr. Steffins was cordiality itself and showed us everything pertaining to his fine establishment, part of which was undergoing renovation. Leaving Mr. Steffins I called on Mr. Godfrey, and on calling on my friend Root found him away and represented by Mr. Swister, who was formerly in my own city. Coover is another California worker back again in Chicago, and still specializing on his theatrical work.

Konig, located on the North Side, is another of the young men who have established a lucrative business, and a little further toward the lake De Vos is comfortably fixed in the beautiful residence studio built by La Marsh. The De Vos studio seems rather out of the way of business, but the work pulls the people to it. I was sorry to miss friend Varney, but he was out when I called, and I was forced to scurry along to Denver. Denver was booming. Rose & Hopkins, at the old stand, were busy turning out good work, such as the public likes; and Nast was up to the ears in work. Here, too, I came across Billy Rundle, who has fitted up a fine studio, and may be relied on to score that success that all his friends wish him.

Bidding adieu to Denver, I travelled to San Francisco without any stop-over, and spent a week, most of which, as usual, was given up to visiting photographic friends.

San Francisco is very near home, and I will not attempt to say much about any particular studio. But I found here the prominence of the young men. Noticeable among them are Boyé & Habernicht, who started in a modest way five years ago, are now doing one of the finest businesses in the city, are getting high prices, and have from time to time so improved and enlarged their establishment that it now ranks among the best.

Vough & Keith, in the gallery built years ago by the well-known firm of Bradley & Rulofson, are also in the "exclusive" trade, with its accompanying high prices. Thors, in the Marceau gallery, is turning out that special quality of work for which he is famous.

But I have been already too long on my journey and must not do more than merely mention names. Ransmusser is another of the coming men, and the Stanford studio is another new place. Alissy has the beautiful Morse gallery; Bushnell is doing, perhaps, the largest business in the city, and the old established Taber gallery flourishes and still specializes on bas-reliefs. And, to make still another, Furman, returned from England, will open in San Francisco.

In conclusion, the feeling inspired by my travel is one of optimism for the future of professional photography. I find that it is everywhere making rapid strides and on the progressive. The spirit of fraternity is universal, and I thank the many friends whom I had the pleasure of meeting for the warm welcome which was ever accorded to me.

NOTES ON PORTRAITURE.

BY ROBERT MELVILLE.

PORTRAITURE is a subject on which very much has been written, but there is room for much, for it is the life of the professional protographer. Abler pens than mine, wielded by abler photographers, have dealt with the subject under varying aspects, and if I approach it my excuse is that it is a subject on which I have not previously written. I may, therefore, possibly give a note or two which will be useful to at least some of the younger men —those just entering the profession. We have heard much lately about new school workers, and much about the amateur workers, who are supposed to form a little cult all their own. Several of these latter have produced work of a very interesting kind, and, it might be said, of a high order. Those who have done so have been in most cases women, and in several instances they have become professional workers. Their strength lies in their natural refinement and their education and in the fact that they do try hard, and do not incline too much after extreme effects. I do not know whether they make it pay, but they ask and appear to get good prices. This suggests that a fundamental mistake of young photographers is to hunt too carefully after the effects, in posing and lighting, of other photographers. Study the work of others by all means, but don't be too slavishly imitators. A great bane of photography is its narrowing to certain set rules or ideas. The photographer studies pose by the works of other photographers, and not by the study of men and women. A sitter comes, and as we see him or her posed we instinctively think of the rules of the pho-

tographer of animals; "a photograph of a dog should show all four legs, the head, tail, and both ears." There is too much of the recording map in much of our photography. Instead of setting the sitter up to a scale, let him pose himself. The photographer does not by this forfeit his own skill. He can direct and arrange on the lines which the sitter naturally adopts, instead of on the lines taught by long habit. The photographer, to speak plainly, has been a great coward in the matter of pose. If he could seize upon something new and make it his own—a sort of specialty or leading line—he was happy. The result has been much commonplace production.

Your sitter calls, say, a man. Have you the ability to engage him in conversation a few minutes? Or let him look over some portfolios or paper which interests him. You will soon get the lines on which to work. That is, get first an idea of a natural attitude and make that the basic idea, instead of using some stock pose. There will still be lots of room for your skill. If the cuffs have slipped down out of sight this is a mere accident, not a characteristic part of the man. They may be brought back where they will show. If the man's coat happens to be creased in somewhat undue fashion, by all means let it be made right. With many people—with many men—clothes are the most important factor. If a man has a spic-and-span appearance, by all means let it be fully emphasized in the photograph.

In a photograph of a lady there is more which requires careful rendering. The textures and colors of feminine raiment are beautiful and varied, and a photographer must say whether this gown is woollen or silken, whether stately in its richness or dainty in its softness. But here, again, the set pose is to be avoided, in that it too often destroys the animation of a person. A lady may stand in evening dress, with a bouquet in one hand and the other hand touching a pendant fan; but if so there is a very decided animation of some kind in her face. She may be in expectation, just waiting for the moment when the carriage is ready; or she may be waiting, with sparkling eyes, between the dances. She is not, surely, overcome with self-consciousness, as she is represented in the photograph. A proper expression would make the beautiful dress and figure a setting to the face; as it is, the face is subsidiary to the rest. In the one case we should have a centre of interest, in addition to the rendering of detail; in the other case there is no such leading point.

The need of naturalness—really the getting away from "photographic pose" and expression—has been much emphasized of late in regard to children's photographs. People are getting hold of the idea that there are possibilities in child work beyond what the old-line photographer has given us, and the result appears likely to be a general advance in the quality of this class of work. To begin with the children are commonly supposed to begin right. We may, therefore, hope that the improvement in this class of work will spread to the "grown ups."

Dr. Emerson, among other requisites of portraiture, has some remarks on the necessity of obtaining character, and makes one or two suggestions as to how to obtain it. "The great thing is to obtain the character or expression of the model. Everything must be sacrificed to this in portraiture, and enough of the figure must be taken in to thoroughly express the character. Thus the head alone may do in some cases; in others it will be necessary to include the hands; in others the whole body. It is needless to repeat that all portraits should be taken by quick exposures. The best way is for the student to have a very long elastic tube to his shutter; then he can walk about and talk to the model, and when he sees a good natural pose he can expose, and his picture will probably be good. The present way of posing—using headrests, etc.—is feeble and archaic, and certain to result in failure.

This is the opinion of one who sets a very high standard for photographers, and who not only lived up to his standard but also raised the standard of photography as a whole, and the opinion is interesting because of its simplicity. Of course, his suggestion to walk about the room, with a rubber bulb in one hand, would not suit the average portrait lens of the average portrait photographer. That, in order to attain the rapidity which is recommended, has too little depth of focus to admit of such a practice. But the whole idea is one worth carefully thinking over.

COLLODIO-CHLORIDE EMULSION.

BY C. T. SUTTON.

UNDOUBTEDLY the manufacture of a collodio-chloride emulsion is a much more difficult operation than is the preparation of a gelatino-chloride, on account of the difference in the solvents, for water, being the most universal solvent, and nearly, if not all, the salts used in emulsion work being soluble in water, it is a comparatively easy matter to choose from among the large number of suitable salts, and many variations may be made; but, as alcohol-ether is the solvent in collodion, the choice is very much more limited.

The usual ingredients in a collodio-chloride emulsion are collodion, silver nitrate, an alkaline chloride, and a preservative.

As with gelatino-chloride, the selection of the colloid is a very necessary item in collodio-chloride, and to make it successfully the pyroxyline must be carefully studied, likewise the specific gravity of the ether and alcohol, or no definite result will be obtained. For making up collodion, 0.720 ether and 0.820 alcohol should be used, thus insuring as little water as possible in the emulsion, a very important item to consider, for water tends to destroy the strength of a collodion film. Methylated alcohol can be used for making collodion, provided it is methylated with wood spirit and not with mineral naphtha. Before using methylated alcohol for collodion mix the alcohol with water, and if it keeps bright and colorless it may be safely used, but if on the addition of water the alcohol becomes cloudy, it must be rejected. It is rather difficult to obtain alcohol commercially methylated with wood spirit, and that is why absolute alcohol is generally recommended, but in quantities this is quite out of the question on account of the expense. Alcohol methylated with wood spirit can be procured under an inland revenue license, which may be obtained cheaply, and is generally readily granted, provided a guarantee is given that it will be used for manufacturing purposes only. Under this license methylated alcohol of 0.820 specific gravity may be obtained, which is a good strength for collodion; a higher specific gravity than this should not be used on account of the extra water it contains, the aim in a collodio-chloride emulsion being to keep the water down to the lowest possible limit.

Pyroxyline is only supposed to be of two varieties — the high temperature and the low temperature; and while this is true in substance, it is not so in fact, for both high and low temperature vary considerably. The success of collodio-chloride largely depends upon the pyroxyline employed, and, unfortunately, the writer has not been able to discover a commercial pyroxyline which is exactly suitable for collodio-chloride without further treatment; but, fortunately, there is a process by which one commercial kind can be made eminently suitable. It is a great pity that low-temperature pyroxyline cannot be used as it is, or a very strong film could be obtained; but once the film of low-temperature pyroxyline dries no toning will take place, as the silver salts seem to be locked up in the film. High-temperature pyroxyline, on the other hand, gives a film which can be easily worked when dry, as it is very porous, but the disadvantage is that it is rather rotten and cracks. What is required for collodio-chloride is something midway between the two, combining the porosity of the high temperature with the toughness and strength of the low; and, unfortunately, this is not obtainable commercially. But if a good and suitable low-temperature pyroxyline is dissolved in ether-alcohol, precipitated by water, dried, and redissolved, a very strong and porous film is obtained. The question is merely one of expense, and at first sight this seems a stumbling-block, but, fortunately, is not so in reality, for some of the low-temperature pyroxyline is very soluble, 20 to 25 grains dissolving in one fluidounce of ether-alcohol, and even with the latter the alcohol may predominate; also ether of 0.730 can be used. With the better class low-temperature pyroxyline a quarter pound may be dissolved in 45 ounces of 0.820 alcohol and 35 ounces of 0.730 ether; this, of course, makes a thick, glutinous collodion, but one that is fairly workable. It should be left to thoroughly dissolve, and

then either slowly poured into a fairly large body of water, or, better still, into a small wooden trough down which a small stream of water is playing. It is advisable to pour the water and pyroxyline into a canvas bag, as it is rather difficult to collect the pyroxyline otherwise; it should then be squeegeed and drained of as much water as possible, and *thoroughly* dried before dissolving again. The solution is usually of a very pale-yellow color. It is not exactly understood what change takes place in the pyroxyline when it is washed or precipitated, but the hypothesis is that some water enters into combination with it; at any rate, that some chemical change does take place is proved by the absence of contractility after precipitation.

The addition of a small quantity of castor oil and Canada balsam is considered to reduce the contractility of collodion, but the writer advises discretion in the use of Canada balsam, as it has an effect upon the color of the image.

Commercial collodion, as generally made up of five to six grains per ounce of ether-alcohol, is not much good for collodio-chloride work, and it will be found necessary to use about nine and a half grains of precipitated pyroxyline per ounce of ether-alcohol; and as large quantities of alcohol must be added with the silver chloride and organic preservative, it is advisable to make the collodion as follows at first:

Pyroxyline	95 grains.
Ether, 0.720 . . .	5 fluidounces.
Alcohol, 0.820 . . .	4½ "

Thus allowing half an ounce for the extra alcohol in the salts.

In the choice of a chloride we are limited to about three—viz., calcium, lithium, and strontium; or, perhaps, as Mr. C. J. Leaper advocates in his *First Principles of Photography*, hydrochlorate of cinchonine may be used, although the writer cannot personally recommend this, as he has not found it to work very successfully, perhaps owing to some mistake in the hydrochlorate, although it was purchased from one of the best, if not the very best, and most reliable firms in the chemical trade; or it may be a printer's error in the formula, the quantity given being excessive. But be the cause what it may, although the writer has made many attempts with greatly reduced quantities, the alcoholic solution of the hydrochlorate always being perfectly clear and bright on emulsifying, nothing but a heavy white precipitate has been obtained, so that the writer cannot recommend it from personal trial, although, as the nitrate of cinchonine is not deliquescent, and the nitrates from the above-mentioned metals are, a great advantage would be obtained by using cinchonine, for greater immunity from damp would be secured—an important item where paper has to be kept. It is necessary, when choosing a chloride, to study the color of the image which each gives before deciding. Taking the three aforesaid chlorides, calcium gives a dark blue, lithium a medium red, and strontium a light red print. The writer prefers to use either lithium or strontium, as it is necessary to get a print as red as possible, and for this purpose the best would be strontium; but, unfortunately, it is not very soluble in alcohol, unless the latter is of a high specific gravity. Alcohol of 0.820 will only dissolve about one and a half grains per fluidrachm, and if strontium is used, the alcohol in the plain collodion should be still further reduced. Perhaps the most suitable chloride is lithium, the only disadvantage being its much higher price, this being about six times that of strontinm.

The preservatives generally used are citric and tartaric acids. The choice of these should be regulated by the chloride used, and before deciding upon the preservative it is best to mix a small portion of an alcoholic solution of the chloride with an alcoholic solution of citric and then of tartaric acids, leave them to stand for some time, and note what the effect is, for if solutions of lithium chloride and tartaric acid are mixed and allowed to stand for some time, a heavy white precipitate is formed. This may sometimes account for graininess in an emulsion, which must be particularly guarded against, as no satisfactory method of filtering collodion has yet been found; and, although some writers say that graininess does not matter, or may be overcome to some extent by decanting, "prevention is always better than cure" with this evil, for evil undoubtedly it is.

As alcoholic solutions keep well and collodion cannot be filtered, it is a great saving of time and trouble to make the acid and chloride up into stock solutions. Citric acid is very soluble in alcohol, and a solu-

tion of ten grains per drachm can be made. Tartaric acid and lithium chloride are soluble to the extent of five grains per drachm. These can be filtered before using. It will generally be found necessary to add a small quantity of castor oil to the collodion to make it more flexible, but discretion must be used in adding this, as too much is likely to ooze out and cause white or red spots and lines upon the prints, for the oil will prevent the toning-bath from acting. Five minims of castor oil should be mixed with half a drachm of ether, this being about the right quantity for ten ounces of collodion. The ether and oil should be added to the collodion just before mixing.

Glycerine is also a necessary addition to a collodio-chloride emulsion to keep the collodion film open and workable, and to prevent the silver from crystallizing out; but, like castor oil, it must be used cautiously, as too much will keep the paper in a damp state, thus spoiling its keeping properties.

Collodion should always be allowed to stand for about a fortnight after it is made up to allow it to deposit any impurities, which will be found even in the best high-temperature pyroxyline.

It is sometimes suggested that, after a collodio-chloride emulsion is made it should be precipitated in water and the salt washed away; but the writer is unable to see the necessity of doing so, as the emulsion answers perfectly well without washing; therefore, it seems a waste of time, money, and materials to wash it.

Fifteen grains of silver nitrate per ounce of emulsion seem to be about the right quantity to give a good image, and with this about six grains of citric acid per ounce should be used to insure the emulsion keeping well. If there is an insufficient quantity of citric acid, after a few weeks the paper will show white and yellow spots, either before or after printing. The question of free silver in the emulsion is a debatable point with collodio-chloride, as well as with gelatino-chloride. A certain amount of free silver is perhaps an advantage, but too much is a great disadvantage.

The safest plan is to have as little as possible consistent with obtaining a good print.

A very good formula for collodio-chloride is the following:

Collodion[1]	9½ fluidounces.
Recrystallized Silver Nitrate	150 grains.
Lithium Chloride . .	20 "
Citric Acid	60 "
Glycerine	25 minims.
Castor Oil	5 "

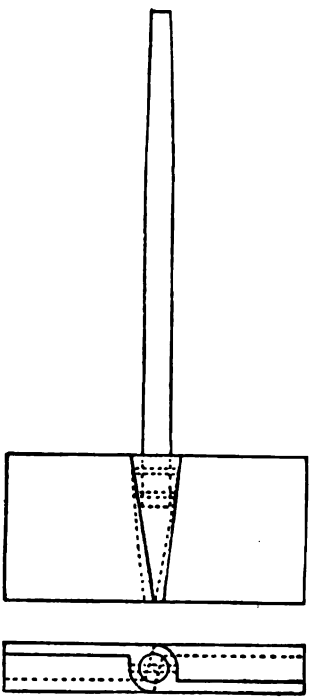
Silver nitrate is very soluble even in cold water, one grain dissolving in one minim of water, and more than this should not be used, as water tends to make the film rotten; the above quantity of silver should be dissolved in two and a half drachms of distilled water, warmed to about 100° F., and then the glycerine should be dissolved in seven and a half drachms of alcohol; this also warmed to about 100° F.—not more, or the alcohol and silver will be discolored; in any case, where methylated alcohol is used it is probable the solution will be slightly discolored, but not sufficiently so to affect the emulsion. The silver should then be added to the alcohol and glycerine, and it will be found that the mixture of the glycerine with the silver will prevent the latter crystallizing out, even in the coldest weather—a rather important point, as should crystallization occur most probably the emulsion will be spoilt. On adding the silver to the collodion a slight opalescence will be noticed. The operations up to now may be conducted in daylight, but the emulsification must be done in an orange-yellow light, or, if artificial light is used, it must be either incandescent electric or a Davy safety lamp, as no naked flame must be anywhere near on account of the inflammability of ether; for the same reason no fire is permissible either in the mixing-room or in an adjoining apartment, as the fumes of ether are very heavy, descend, and are likely to travel through the crevice under the door. The light from incandescent electric or a Davy lamp does not affect the emulsion, and the Davy lamp is perfectly safe even in the densest fumes, for, should they become too strong, the light is extinguished.

If stock solutions of lithium chloride and citric acid have been made up, as before

[1] This collodion should be made up as before advised, containing five ounces ether and four and a half ounces alcohol. In making collodio-chloride emulsions it is necessary to get the salts into the collodion in as fine a state of division as possible. The silver should always be added first, it being much easier to see that no graininess takes place. The silver nitrate should be recrystallized, as the ordinary kind is usually too acid for emulsion work.

advised, four drachms of the former should now be added to form the emulsion, after which six drachms of the citric acid solution should be added, when the emulsion is ready for coating. To make sure there is no grain it is advisable to let the emulsion stand from a quarter to half an hour before using, then carefully decant into another vessel, as by that time the larger particles should have settled down.

A glass vessel should always be used for making collodio-chloride emulsion (except in very large quantities) as the operations can be watched more easily.



Mixing a collodion emulsion is a much more delicate operation than mixing a gelatine emulsion, as silver nitrate is not really soluble in alcohol, much less ether, consequently the writer recommends the following method of mixing in preference to the usually advocated way of pouring the solutions into the collodion, following this up by shaking and stirring, for by the latter method the solutions are put in very unevenly, and the mixing is very often still more so. A glass funnel should be placed in the ring of a retort stand, a small piece of glass tubing then drawn out to a fine point, and attached to the tube of the funnel by india rubber tubing, bearing a pinchcock to regulate the flow of the solutions; into the neck of the funnel a small plugget of cotton-wool should be inserted to arrest any impurities in the silver. The cotton can be thrown among the residues afterward. The solutions should be poured into the funnel separately and alternately, and allowed to flow into the collodion in a very fine stream. Of course, the funnel, etc., must be well washed out after the silver has passed through, or the chloride would be spoiled. After the washing it is as well to run a little alcohol through the funnel and tube to absorb any water which may be left. If a regular stirring is kept up with a glass rod or strip while the solutions are streaming in a very fine grained emulsion should result; but a much better way is to use the little implement shown in the accompanying sketch.

The whole of this should be made of mahogany, the stem being fastened into the blade by mahogany pins, as neither glue, nails, screws, nor metal pins must be used, or the emulsion may be spoiled. The end of the stem should be tapered off to fit into a socket, the friction holding it sufficiently tight, as very little power is required. It should be driven at about one hundred and fifty revolutions per minute, either by hand, treadle, water, air, electromotor, and by its aid a very fine mix is obtained with absolute certainty, the solutions travelling right through the collodion. Before using, the whole of the blade and lower part of the stem should be well soaked in alcohol to decolorize it as much as possible, and directly mixing is finished it should be placed in water, or great difficulty will be found in removing the emulsion. The mixer should be kept in the dark as much as possible or it will be discolored. This style of mixer may be used for bromide or chloride, gelatine or collodion emulsions, but a separate mixer should be kept for each class of emulsion.

If the emulsion is properly made, on dipping a glass rod into it and looking at the light through the bead of emulsion which collects upon the end of the rod, a rich orange color should be observed.

The emulsion must be used the same day it is made, for it will not keep, owing to the rapid evaporation of the ether.

Collodio-chloride may be coated fairly

well by hand after a little practice, if the edges of the paper are turned up to form a tray; the emulsion should be poured into this and floated all over the paper, pouring the surplus back into the containing vessel. The great disadvantage about this way is that it allows the ether to evaporate very rapidly, thus making the emulsion thick, and the coating is then sometimes uneven. As far as the writer's experience goes he has not found a really reliable and satisfactory way of coating by hand.

In toning collodio-chloride it should be remembered that a bath, strong in gold, gives blue tones, and it is not necessary to use a stronger bath than the following:

Ammonium Sulphocyanide .	15 grains.
Gold Chloride . . .	1 grain.
Distilled Water . . .	8 fluidounces.

The sulphocyanide bath is the best for the above emulsion.

Unlike gelatine, collodion is practically inert so far as silver is concerned, for it does not enter into combination with silver and has no effect whatever upon the color of the image, and this is probably the reason why collodion prints are the most stable of all photographs made upon printing-out papers, for a definite salt of silver is formed in collodion, instead of the indefinite gelatinate and albuminate.

In printing with collodio-chloride, if the negatives are thin, a better result is sometimes obtained by printing the image faintly, in the ordinary way, and then placing the printing frame under green glass to finish the print, when a much more plucky and vigorous image will be obtained. The theory of this is that chloride of silver is only susceptible to the blue and violet rays, while citrate and tartrate of silver are affected by green and yellow rays as well; thus when the print is under green glass the chloride does not change, while the citrate and tartrate do.

The writer has had many attempts to increase the strength and tenacity of high-temperature collodion films by the addition of the following: Gum resins in small quantities, bleached lac, Canada and copaiba balsams, mastic, copal, elemi, sandarac, and dammar; but the result has not been particularly encouraging so far as increase of strength and tenacity are concerned, while (probably owing to their organic nature) they exercise an influence upon the color of the image. If it is decided to use any of the above, no large quantity should be added, as they are insoluble in and impervious to water, and no toning, or only a very little, and that of a slow nature, would take place if they were present in any large quantity. The writer has been in the habit of making a saturated solution of each of the gum resins, and adding about six minims of this saturated solution to each ounce of collodion. The saturated solutions of gum resins are very handy in the laboratory as ready-made adhesives, and, as they are all alcoholic solutions, there need be no fear that they will not keep.

All information regarding the conditions under which a license to use methylated spirit for manufacturing purposes is granted may be obtained at the local inland revenue office. A mixture of high and low-temperature pyroxylines will sometimes give a good collodion for collodio-chloride work if equal quantities of each are taken, but a small portion should be tried first, as some pyroxylines do not mix well. A reference to the writer's article on the manufacture and properties of pyroxyline, which appeared in the *British Journal of Photography* of February 2, 1900, will give a better understanding of the subject, as it is of too lengthy and diverse a nature to be treated here.

If it is found inconvenient to use incandescent electric light, or a Davy lamp, to illuminate the mixing-room, or as in many remote districts they are very difficult to obtain, a lamp may be placed *outside* the window of that department, taking care that it is completely isolated from the ether fumes. The one disadvantage of Davy lamps is that only a very feeble light is obtainable from them, but if all the preparations are made in daylight this is not a great drawback.—*British Journal of Photography.*

"THE antipodes," as the Australasian islands are known to Britishers, have always been the happy hunting ground of the cut-rate man. Now, in New Zealand, they are down to the penny portrait scheme; they are doing eighteen pictures, including six poses, for a quarter. The six poses is the most interesting part. Doubtless the photographers are rushed and the colonials happy.

THE AGFA REDUCER.

A REPORT BY C. H. BOTHAMLEY, F.I.C., F.C.S.

THE Agfa reducer, which is a novel and specially prepared combination of a ferric salt and an alkali thiosulphate, comes into the market as a granular yellowish-white powder, contained in an orange glass bottle fitted with a metal screen cap. Underneath this cap is a glass stopper provided with an India-rubber washer, so that when the cap is properly screwed down an air-tight point is made. The under side of the stopper is hollow, and serves as a very convenient measure for the substance; when filled level to the top it holds about five grammes, the proper quantity of the substance for making 50 cubic centimetres of solution.

In order to prepare the reducer, the measure full of the solid is dissolved in 50 cubic centimetres (1¾ fluidounces) of soft or distilled water; the solution, being easily and quickly made without heating of the water, is vigorously shaken for a short time. This quantity is ample for a quarter plate or 4 x 5 negative, and in a really flat dish can be made to answer for a half plate; but if necessary a larger quantity of solution can, of course, be made up, the solid substance and the water being always kept in the same proportion—*i. e.*, two measures of the solid for 100 cubic centimetres (3½ fluidounces) of water, and so on.

The best plan is to turn the measured solid substance on to a piece of paper and then gradually drop it into the water, which should be kept in motion. If the solid is thrown in a mass into still water it is liable to form a kind of cake, with the result that the process of dissolving takes considerable more time.

The solution is poured over the negative, previously well soaked in water, and the dish is rocked gently. The reducing action begins almost immediately, proceeds regularly, and takes place in a remarkably even manner. The change is readily watched, and when reduction has gone far enough the negative is well rinsed with water and afterward well washed in the ordinary way, and the process is complete. Nothing could be more simple. The time required varies with the degree of reduction desired, and also to some extent with the nature of the plate—hardness of the gelatine, etc.; but in ordinary cases of over-developed negatives I find that about five minutes is usually sufficient.

Lantern slides and diapositives can also be satisfactorily reduced in the same way. The color, if originally warm, becomes somewhat colder after reduction.

Bromide prints can likewise be successfully reduced by the Agfa reducer, though, if the desired reduction is slight, it is advisable to dilute the reducer, contrary to what happens in the case of diapositives. The color seems to be, as a rule, a little warmer after reduction. The process is very convenient in the case of slightly over-printed bromide prints.

Direct experiments made by printing on print-out papers from the same negatives before and after reduction show that the action of the Agfa reducer is practically proportional to the opacity of the image, and consequently the gradations and contrasts of the negatives are substantially the same before and after reduction. For this reason the Agfa reducer is especially valuable in the case of negatives and positives that have been over-developed without being fogged. There is a slight tendency toward increased contrasts in the reduced negative, but in my experiments it was only very slight.

It is important to mention that soft or distilled water must be used for making up the reducing solution. When very hard water is used, a certain quantity of a brown precipitate is formed. If, through the use of hard water, the negative or positive should acquire a slight brownish-yellow stain, this can readily be removed by immersion for a short time in a weak alum solution, to which a small quantity of oxalic acid has been added.

The same quantity of reducing solution can be used for two or three negatives in succession, though its action naturally becomes weaker, and it is important that it should not be exposed for any length of time to bright daylight. The solid substance itself should also be kept in the shade.

The Agfa reducer is not only efficient and easily worked, but it is also particularly convenient, a point of importance in view of the fact that reduction is only an occasional operation. It is very compact in form, and is always ready for use. The making up of the solution is simple and rapid and involves no weighing.

PORTRAITURE AT THE PHILADELPHIA SALON.

BY WILLIAM EDWARD WARD.

So much has been said, and not always wisely, about the work of the incorrectly called "American School" that a peculiar interest attaches to the third Salon held by the Photographic Society of Philadelphia.

The Society has gathered 204 photographs, of which 118 have been selected by a jury, and 86 have been sent out in response to invitations. This exemption of some exhibitors from the ordeal of judgment has caused some adverse criticism, but the iniquity is more apparent than real. The exemption has been extended only to the judges themselves and to four collections of foreign work, presumably held in trust by some friend in this country for the authors. The foreign exhibitors are Craig Annan, Demachy, Puyo, and Hofmeister. All of this work has been previously exhibited, and none of it is work of the year. With the exception of these four men the work is entirely American, and presumably much of it has been produced during the last twelve months.

The exhibition is held in the building of the Pennsylvania Academy of the Fine Arts, in a room some 35 by 80 feet. The walls are dark wood as to the first thirty inches of their height, and dull maroon canvas for about twelve feet more to the curve of the roof. The light is entirely a top one, and the whole appears a little dark for the best seeing of the pictures.

The hanging of the pictures is sufficiently satisfactory. In trying to be roughly geometrical in the arrangement, the hanging committee have done all they could. The variety in mounting gives a general appearance of spottiness to the room. More than 10 per cent. of the pictures are mounted on white or cream mounts, and one or two others, such as Stieglitz's "Portrait of a Baby," have a bold preponderance of white. But in a view of the whole the mount decidedly dominates the print, except the invitation prints from Craig Annan and Hofmeister. Stieglitz's "Mending Nets," a print of some 21 by 17 inches, is not only the largest but is the only large print.

To this almost universal smallness in size add a general lowness of tone, and the grays and greens of broad mounts are sufficiently insistent. Gilt frames are in a minority; there are less than a dozen of them, and what there are are in good taste. The pictures are either framed close up in heavy dark frames, often without any relieving strip, or they are mounted on a generous size of paper and bound with a narrow strip of wood or even with a passe-partout. The glazing causes unfortunate reflections in some cases, and a few prints are most effectually skied at a height of some seven feet.

Of the 204 prints exhibited, 140 may be termed figure subjects, and of these 80 may be classed as portraiture. This figure work falls into many classes. There is some of it which is good, very good, whether from the technical or artistic side; some is frankly and daringly, sometimes successfully original; and some of the best is that in which photography is subsidiary to the personality of the exhibitor. Perhaps the most forcible suggestion is that there are several workers whose pictures have a merit which lifts them from the ruck, and those who are most successful are those who are least freakish. The second thought is that honors are distinctly with the women. In several cases the entire number of pictures shown by ladies are remembered, not because they are grouped together (for pictures by one worker are scattered throughout the room), but on account of individual merit. These ladies are Ema Spencer, Margaret M. Russell, Mary Devens, and Miss Watson, and Francis Watts Lee is the only man

whose work has the same merit. We ignore here one or two workers, including Craig Annan and Alfred Stieglitz, whose works have been many times exhibited.

Miss Eva Lawrence Watson has a "Head of a Young Girl," which is one of the most pleasing and delicate things in the exhibition. Perfect in modelling without retouching, carefully vignetted without announcing the fact, it is one of those rare things which unite good photography and good art, giving equally the "likeness" and personality of the sitter. Miss Watson's work has a simplicity which attracts and a strength which holds good. Her portraits are good technical work, far removed from the best professional work, by difference of treatment, not by difference of merit. Francis Watts Lee has two pictures, "Sisters" and "Stephana," which should be seen by all photographers of children. In one we have two little girls in dark dresses; in the other we have one girl similarly attired. The children in each case distinctly know they are being photographed, but naturalness has been retained.

The three pictures by Ema Spencer are delightful little examples of child portraiture. Two of them are "at home," but not more "at home" than they could be in any well-appointed studio. Their leading characteristics, as they would appeal to the educated lay mind, are their tone and their entire naturalness.. We have a little child holding a saucer of milk for pussy, and pussy gives the title "A Mute Appeal," and we have the same little juvenile puffing at a dandelion clock.

Margaret M. Russell's work is not professional. She has a very pretty portrait, in "red chalk," of a child; but her five pictures are notable in that not one of them is commonplace, and in two outdoor misty scenes she successfully holds her values, a point which is too often missed in the Salon landscapes.

Taken as a whole the portraiture at the Salon rises above the landscape. There is more individuality in it and more merit. In the latter individuality gives place for a striving after some effect, and there is much evidence of endeavor to imitate.

Beside the workers referred to, there are several others who have examples of successful portraiture; but the entire collection which could by any stretch be called "professional" numbers less than fifty. By "professional" we mean here pictures in which the likeness is a leading feature, sufficient at least to let the picture be accepted by friends of the sitter as a portrait.

The new school is strongest in pictorial or decorative treatment of the figure, and it is on this line that its influence should be most helpful to the professional. Prominent among this class of workers are Edmund Stirling and Clarence H. White; the former has five and the latter eight subjects which should be suggestive to the professional. But Heaven forbid that any one should *imitate* these workers; an imitation of a strong thing is already too common an infliction.

We have refrained from criticising the palpably non-photographic productions—those in which after-treatment is the leading feature. Clarence H. White has a portrait of this class, one of his two departures from the line—or series?—he has made his own, and one of his two least successful exhibits.

F. Holland Day's exhibit is very unequal, and he has a rendering of "The Annunciation" which is the worst thing in the Salon.

The Salon is a successful result of hard work on the part of some of the members of the Photographic Society of Philadelphia, and to them the thanks of the photographic world are due.

There are several thoughts suggested by the Salon. There are few workers who have as yet fairly found their feet, and of these the greater number are women.

The higher portraiture, in which a good likeness and good technique are allied to sound pictorial qualities, is in the hands of less than half a dozen workers, not one of whom appears to have essayed the male figure. And the American landscape school is in so embryonic and chaotic a state as to be practically non-existent. There is much hope for the future in the treatment of the figure, but here a few capable leaders need an intelligent following ere we can say "school;" and in landscape work those who are laboriously stumbling along the false road of "effect" need a strong leader to shake them out of the dark-room and the manipulating frame into the glorious liberty of the sunshine and the air.

PHOTOGRAPHIC MOSAICS, 1901.

THE YEAR-BOOK OF AMERICAN PHOTOGRAPHY.

THE new volume of *Mosaics* is just ready, and those who have placed their order early will receive the copy by about the same mail as this MAGAZINE.

Identical in many respects with the *Mosaics* of so many years, the volume now takes another step forward and shows so many changes and improvements that its old friends will look twice before recognizing it. We say old friends advisedly, for for thirty-seven years those who have bought the volume and have believed in it have been held as friends and not as mere "readers."

Occupying as it does a unique position —the standard year-book of the professional photographer—*Mosaics* is in the highest sense a co-operative effort. Conservatively progressive, it, year by year, presents to the profession a record of what the profession is doing, and year by year it proves that the trend of professional work is ever upward.

There has been much shallow talk of late about the degeneracy of the work of the fraternity, and the fraternity now replies, silently and effectively, to the vaporings of the unlearned. More pictures than ever before adorn the pages of *Mosaics*, and they are pictures, selected by our best men, to show the best they are doing.

They thus make an authoritative record of where American photography stands to-day—a record of which any country may feel proud. The block-making of these illustrations has been placed in expert hands, and neither time nor expense spared to make the engravings worthy translations of the originals. The printing has been carefully done on a slow-running machine especially built for fine work, and the paper has been made to our instructions by Dill & Collins.

"The best paper in the world" was offered to us, but was not considered perfect, and a special brand of paper, prepared exclusively for fine color printing, was further improved before we were satisfied.

To merely list the contributors to *Mosaics* would be to mention all the leading photographers, not only those whose works are universally known and the leading prize-winners, but also those men who work on exclusive lines and seldom let their pictures appear before the public.

As in past years, our review of the year embodies the most useful hints and formulæ of the year's work.

The practical papers submitted in *Mosaics, 1901*, have a special value. To welcome the new century the improvement has been made in *Mosaics* in every department — printing, illustrations, reading matter, general get-up. The papers, written expressly for *Mosaics*, on subjects chosen by its editor, are fewer than in previous years, and of greater length and practical value. Mr. Henry Troth contributes a complete monograph on "Platinotype Printing for Professionals." Mr. Troth is equally at home in commercial and in pictorial photography, and he has the gift of lucidly communicating his knowledge. He describes minutely the handling of the different platinotype papers, tells how to obtain sepia tones, and explains the method of brush development. Dr. John Nicol writes on "Plain Silver Paper; Making and Printing," describing the choice of paper, sizing, sensitizing, printing, toning, etc.; in fact, a complete little manual. Edward W. Newcomb is equally happy in dealing with carbon work, which for years has been his pet subject. Mr. Newcomb is so much at home with all the phases of carbon that he fails to understand why any careful person should fail; and, indeed, it would seem that no one should do so after reading his very full description. He does not miss a single point; everything is covered: the choice of tissue, sensitizing, exposing, developing, single and double transfer, the actinometer, the safe-edge, etc. In getting three specialists to write on the three printing methods most dear to them—and in so lucid and complete a manner—we feel that we have been fortunate. The modern ozotype, which may eventually materialize in America, is briefly described by A. D. Guthrie.

The Rev. T. Perkins sends a suggestive paper on "Out-door Portraiture," from an amateur and a common-sense point of

view. Mr. Perkins scores the work of the average amateur, and gives some useful hints which can be read with profit by the professional. "Some day," we are told, the photographer will work without a glass house, but the person who will see the day is not yet born. Many, therefore, will turn with interest to Mr. W. E. Ward's "Notes on Studio Construction." Without attempting a complete monograph, Mr. Ward gives the common-sense of many points connected with studio building, and illustrates his remarks with diagrams. The choice of a north light is discussed and commended, with particulars of other lightings. The size of a studio, the pitch of roofs, the glazing, are all discussed in a suggestive manner. The mistakes most common are referred to. Single slant is explained, with its advantages and disadvantages. The positions of the dressing-room, the dark-room, etc., are discussed, and windows for special effects are fully described.

Mrs. Catharine Weed Ward writes on "Classifying and Indexing Negatives"—a record of her actual experience and method. Mr. William Gamble, editor of *Penrose's Process Year-Book*, gives particulars of "Photographic Illustrations for Catalogues;" and in "The Teeth in Photography" Mr. G. G. Mitchell gives hints on a subject vital to the professional. Ernest Brown writes enthusiastically on "Metol Development;" Geo. E. Brown on "Everyday Research;" and Theodore Brown goes into the question of "Stereoscopic Vision."

Mosaics has for many years steadily gone out of print within a few months of issue. This year we have increased the edition, in deference to the increased value of the book; but *Mosaics, 1901*, will follow the custom of its forerunners and soon be unobtainable. As a sound, sober record of what the profession is doing it should be in the hands of every worker. The young man will find a stimulus in its pages, the older worker will find encouragement.

Mosaics comes in a new cover, on new paper, with more illustrations and better reading matter than ever. Each paper-bound copy is protected in a neat mailing box. Price in paper 50 cents, or in cloth library binding $1, mailed free on receipt of price.

NEWS AND NOTES.

M. CHAS. GRAVIER, the veteran photographer and writer on photographic subjects, has suffered from an experiment with an automatic photographic machine. With these machines the "sitter" stands within a very few feet of the lens, and a flash-light picture is obtained. In this case too large a charge of magnesium appears to have been used, and the sudden light affected M. Gravier's eyes, which were somewhat weak, and he appears to be gradually losing his sight. M. Gravier is past sixty, and oculists fear the case is hopeless. Flash-powder is so indiscriminately used by amateur workers in this country, and especially for at-home portraiture, that this word of warning should be noted.

STEAMED or frosted windows are a great nuisance to some photographers. The difficulty is largely overcome by rubbing the window, after cleaning, with a little glycerine. This is put on with a rag and rubbed to the merest film—just a polishing. Show-cases should be ventilated, and a few holes along the top, covered with several layers of finely perforated zinc, each layer a quarter of an inch above the one below it, will allow ventilation and at the same time arrest all dust.

THE *British Journal* thinks that many photographers could add to their incomes by publishing local guide books, in which reproductions of local photographs would figure prominently.

SPEAKING at the opening of a picture gallery, Lord Herschell made one or two pertinent remarks as to the present cynical trend of criticism and the condemning of what was popular. "By gazing upon good pictures," he said, "they learned to see more in nature than they ever saw before. It was not always what was generally called the picturesque that impressed them most. The tendency of art critics nowadays was to discover that, if an artist was able to please a large number of people his art

must be very poor; that the real artist must so paint that only a limited number of people could appreciate him. His idea was that art of every kind was very various, that it appealed to many sides of our nature. He did not mean to say that there was no such thing as false sentiment, or false sense of art, but he did urge them to judge somewhat for themselves. There were beauties which the artist's eye only could see. On the other hand, while he saw defects, the public had a certain advantage over the critic in their wider appreciation."

To remove paint from a window wash it over with a strong solution of American potash. This will soften it so that it may be scraped away with a broad chisel.

THE addition of antiseptics, such as carbolic acid or oil of cloves, will prevent the putrefaction of starch paste; but they are not to be recommended, as it is so readily made as required, and is better in every way when used fresh.

THE *Amateur Photographer*, speaking of the present fashion of mounting prints on a layer of several differently tinted papers, each one cut slightly smaller than the one immediately underlying it, says: "The purpose is precisely the same as that which governs the series of lines and tinted bands veiled on a white or light mount round a picture, which is commonly understood to belong to France, and which was resorted to by Mr. J. Craig Annan in his 'one man' show at Russell Square not long ago. In the sequence of tints either graduation or vivid contrasts may be secured, and an infinite number of changes and variation. With a good flat edge and a sharp knife paper may be trimmed more truly than the most dexterous hand could rule or paint a line or border, while there is a great saving of time and labor. Success of effect, however, depends on the proper tints being chosen, and this can only be done if really fine crayon and other papers are used. The critics who refer to the American prints being mounted on 'packing papers' display lamentable ignorance, the pure colors and pleasing tints used being only obtainable in the finest papers, some of them very difficult to obtain in this country."

THE more the photographer looks for poses and ideas anywhere and everywhere and the less he blindly accepts his studio traditions the better will his work be.

THERE are latent possibilities in most sitters beyond the mere dozen photographs. Don't let the negative be dead stock; if you go about it properly it can often be valuable for repeat orders or for other sizes.

EVERY one who has had to copy a drawing or engraving of large size knows that the parallelism of the drawing and the ground glass is a point which must not be overlooked. In the *Photo Gazette*, M. Gerstenbrandt, of Gratz, gives a method of securing this necessary condition which is simple and effective. Having levelled the camera, apply a mariner's compass, mounted on a square block of wood, to the board bearing the drawing, and note the exact position taken up by the needle. Then place the edge of the square against the ground-glass, and turn the camera on its base until the needle marks the same point.

THE hands are not easy to pose in portraits of men. Do not let them be placed so that they are exactly balanced or so that they, in conjunction with the face, suggest the angles of a triangle. They may sometimes be occupied, though this is not always easy with men's hands. They should both be less prominent than the face, and one hand should be subordinate to the other. In the case of men standing one hand may often, with advantage, be thrust into a pocket.

HEAVY drawing or crayon papers of quiet tints are coming into demand to some extent for high class trade, and though sufficiently stiff to lie in a folia, they are too limp to stand on a mantel. To prevent this the mount must also be mounted on a stiffer support. To prevent curling dampen the card support well and evenly with a sponge. Then slightly and evenly dampen the paper mount. By this time the card should have curled and expanded. Dampen it again slightly, coat the paper with thin starch paste, and press the two in contact. If the card has been evenly damped and expanded the whole will dry flat.

AMERICAN PORTRAITURE

I. By E. Goldensky, Philadelphia

AMERICAN PORTRAITURE

II. By F. Gutekunst, Philadelphia

AMERICAN PORTRAITURE

III. By Schloss, New York

AMERICAN PORTRAITURE

IV. By Louis Schreiber, West Bend, Wis.

AMERICAN PORTRAITURE

V. By B. Frank Puffer, Harrisburg, Pa.

AMERICAN PORTRAITURE

VI. By Hemperley, Draper & Carnell, Philadelphia

AMERICAN PORTRAITURE

VII. By John H. Kemp, Scranton, Pa.

AMERICAN PORTRAITURE

VIII. By Dudley Hoyt, Rochester, N. Y.

A PROTEST.

THERE is in *Scribner's Magazine* for November an article on "The Cross Streets of New York." Those New Yorkers who are interested in the many pictorial aspects of their city have always had a keen appreciation of the beauties of the streets running east and west to the rivers. Of course, not all the streets are "pictorial," though even the most prosaic of them takes on glory when seen from the elevation of a passing train, at the hour when the red of the sunset is just melting into green. Many New Yorkers have turned with eager and pleasant anticipations to this article, and most of them must, we think, have experienced a sense of disappointment. We all look first at the pictures, and, alas! they are not New York—they are "Scribnerish."

Some of the pictures are dated 1897, and there has evidently been no haste in their preparation. But that they represent New York—No! The originals have been done, some in color, some in wash, and one at least with pen and ink, and we have as a result a collection of pictures in which pictorial value has been obtained at the utter expense of truth. It is one of those instances where the hard, unsympathetic photograph would have proved superior to the artist. This may cause a smile, but let the pictures be examined. There are fourteen of them—not counting a somewhat empty tail-piece—and in not one of them is there a glow of sunlight. Think of New York reduced to the level that London is commonly supposed to occupy. What a howl would go up at the bare suggestion. There is an attempt at sunlight in three of the pictures. One of an arch under Brooklyn Bridge, where the artist, rightly recognizing that it is a case of insistent glare and insistent shadow, has kept his picture almost to the two tones, but with a gray flatness that insults sunshine and shadow alike. And two cross streets—Fourteenth and Twenty-third—are in sunlight of so quiet and dilettante a kind that we look twice before we know it is there. The frontispiece to the magazine shows that old—it can scarcely be called quaint—corner at the junction of Laight and Canal Streets, and several others are "bits" of old streets rendered artistic by trick of the brush, a waving weakness of line marking causeway, or window-sill, or door-post; an unreal figure of "picturesque" poverty, or a "pictorial" foreground of garbage.

The weakness of photography is in its lack of selection; the weakness of the artist is that instead of selecting he sins against truth. Whoever saw Madison Square so artistically smudgy in its walks that nothing but a row of presumably newspaper readers prevents us from conjecturing its walks as snow-covered.

If *Scribner's* had followed the usual plan, of ordering about a score of negatives, at $1.50 each, there would have been a deserved howl when the results were seen. But if less artistic, they would have been more real. If they had paid one-fourth the price that they have given to their artists they could have had illustrations better in every way. I say *could;* perhaps they *would* not.

Scribner's have in the past had photographic illustrations—including New York scenes, and they have not been altogether what they might have been. But the faul was not in photography, but to the choice of the man.

But *Scribner's* must have felt the difficulty of finding that man; truly he is hidden deep.

The photographer is so very prone to give the lie to those who would prove him more than a mechanical hack. We put down our *Scribner* and pick up the *Ladies' Home Journal.* This looks interesting; the great Philadelphia monthly has always been the good friend of photography, and here on the front cover a photographer displaces the artist. Congratulations to Moore & Stephenson, of Atlanta, whose work figures here, with acknowledgment. We open the the book and find a double-page set of illustrations: "The Most Artistic House in New York City." Whose fault is this? The photographer's, the blockmaker's, or the printer's? Whoever it is, the editor must share the responsibility. We have here eleven interiors: carved work, wrought iron, fancy glass, tapestries, bric-a-brac of a thousand quaint shapes or shimmering colors. What possibilities if well done—

and there is the man who could do it well—but what possibilities for harshness and for shadows if badly done. And it has been badly done. Enough said.

There are many directions in which it is photography's logical and artistic mission to supplant the artist. But those wide-awake and progressive publishers who would help to the fulfilment of the mission are subject to sad discouragement.

THE SENSES: SEEING.

By The Guerin College of Photography, St. Louis.

A REMINISCENCE.

BY JAS. F. RYDER.

MY FIRST PUPIL.

FIFTY years ago I stopped at Elyria, Ohio, for the winter, having my little studio in a hotel, the Beebe House. One evening a young man came to the hotel, inquiring for me, told me his name was Wykes, and that he came up from Black River, a small village and port on Lake Erie.

He had purchased a camera and outfit from Lew Higgins, who was to teach him to make daguerreotypes, from which he could make lots of money.

"Lew" gave him a half day's instructions and deserted him. Wykes desired instructions from me, and could come for them only in the evening, as he was busy through the day. He was obliged to come nine miles, over a poor road and in winter weather. All day long he wrestled with his customers and the rather dark problem of daguerreotype-making without knowing how.

I was sorry for the good, honest fellow, and agreed to take him. The instructions commenced that evening, and, as through the entire course, were orally given. I could not teach by demonstration in the evening, and as he fancied he could not stop through the day, and I knew I could not leave my own business and go to him, it was determined we would impart and receive by "talking it over." The question of compensation was agreed at the beginning to be a gratuitous matter. It cost him something to drive each night, it cost me nothing, and so it was my time against his horse. I taught him first, as well as I could, what was the requirement for quality in a daguerreotype by showing my own sample pictures. Each evening of his coming he would bring with him plates which he had made trials upon since his last visit. We would compare them with my own work, and I would point out and explain where there was a lack or fault in his work, and direct him how to change or avoid a repetition of it.

He was a good student, a careful observer, and eager to learn. He did learn, and, to my pleasure and his own, was in a few weeks able to go alone. I was quite proud of both him and myself for having accomplished quite a feat of education under such conditions and in comparatively a short period of time.

LITTLE BESS.

By J. F. Ryder, Cleveland, O.

I drove down with a friend one day to fish from the dock in the lake, and called upon my pupil, Mr. Wykes. I found Black River a very small place, inhabited mostly by sailors and farmers. I could not well see how he could find enough to justify his remaining. He claimed to have sufficient to support him, between his farm and his little picture trade. Later he became quite prominent in his work, and removed to a city that was able to give him a fine patronage.

At the Convention exhibition of the Ohio-Michigan Association at Put-in-Bay, Ohio, August 21st, I met among other friends J. B. Hoff, of Lorain, Ohio, and by him was invited to come and be his guest for a few days. The Black River village of years ago, with a population of possibly 100 souls, is now the Lorain of 17,000 prosperous people, with a big steel

plant and a ship-building company, where are built the largest vessels floated upon fresh water. It was much like a dream to come back to this smart city, with its several railways and its great tonnage.

Mr. Hoff has a snug business, and takes good care of it. He permitted me to assist him in handling the camera and the sitters, which seemed like going back to school after some years' vacation.

I send you a photograph of his little daughter "Bess," the last sitting I have attempted; and what wouldn't I give for the first one I ever made?

A RAY FILTER COMPETITION.

FIRST PRIZE, CLASS 1, RAY FILTER COMPETITION.
By Henry Fair, Lewiston, Idaho.

SOME months ago Messrs. Burke & James, of Chicago, announced a ray filter competition, with an attractive list of prizes. The awards have now been made, and we are able to present the chief winning pictures in the two classes.

Class 1. Landscape with cloud effects. 1st, Henry Fair, Lewiston, Idaho. 2d, W. W. Bissell, 91 Main Street, Rochester, N. Y. 3d, Gus. Horlen, 5127 Wentworth Avenue, Chicago, Ill. 4th to 10th not arranged in order of merit—Robert D. Stevens, 40 Mahl Avenue, Hartford, Connecticut; Arthur Anderson, Wahoo, Neb.; J. W. McCaslin, 5747 Drexel Avenue, Chicago, Ill.; John B. Watson, Warsaw, Ind.; Chas. T. Springman, 1024 Fourth Avenue, Detroit, Mich.; Frank E. Foster, Iowa Falls, Iowa; Adolph Dittner, Fort Dodge, Iowa.

Class 2. Flowers. 1st, W. F. Luick, 180 Ogden Avenue, Milwaukee, Wis. 2d, C. T. Rush, Dubuque, Iowa. 3d, A. W. Rice, Hayward, Cal.

These engravings speak for themselves of the practical usefulness of the ideal ray filters, and Messrs. Burke & James deserve the thanks of photographers everywhere for their enterprise in inaugurating these helpful competitions of skill in the use of photography's modern conveniences.

IF your neighbor is more successful than you are, remember it is not luck, but that there is some reason for it. Find the reason and go and do likewise. The man who envies his neighbor is not as near success as the man who steadily strives to improve.

GRAY'S DOUBLE STIGMAT.

We are pleased to illustrate herewith the qualities of a new lens by Mr. R. D. Gray, which promises much usefulness to the great body of photographers who frequently need an objective which has more elasticity than is usually possessed by the ordinary lens. This new lens is known as the *Double Stigmat*, and is manufactured by the Gray-Lloyd Manufacturing Company, Ridgewood, N. J. According to the claims of its makers, it contains in one objective all the advantageous features possible in a lens without sacrificing the essential qualities of speed and defining power.

The *Double Stigmat* consists essentially of two pairs of cemented lenses, each element being separately corrected, and which may be combined to form either a symmetrical or an unsymmetrical doublet, or which may be used separately as single lenses having rectilinearity except when used as wide-angle lenses. Normally, the combined objective unites in one instrument three lenses of different focal powers, whose values are approximately as 2, 3, and 5. Each of the elements of the combination are separately aplanatic and stigmatic objectives of unusual rapidity, and, of course, unequal in focal length. Thus each element of the *Double Stigmat* gives a sharp image (with the full aperture of *f*/12), an image whose diameter is about equal to the focal length of the element used; with a medium stop the diameter of the sharp image is increased to about double the focal length of the element used.

Another important advantage of the new lens is that each element is contained in a separate cell, with a screw adjustment, by which the separation of the two elements may be varied. The user of the *Double Stigmat* can thus produce any desired degree of diffusion in his image at will. Uniform diffusion is secured by unscrewing the interior lens of each element very slightly. By so treating one element only an image is obtained with diffusion more pronounced at the margins than at the centre. As the unscrewing of the elements changes the focal length as well as secures the desired diffusion, it is necessary to refocus after making the change.

The peculiar feature of the *Double Stigmat*—*i. e.*, the fact that each of its elements may be used as a single lens possessing practical rectilinearity is one which will doubtless have much to do with the popularity of the instrument. This feature admits of the use of either element separately for architectural work up to the size quoted for the doublet working at full aperture. The intensity of the *Double Stigmat* in its ordinary (unsymmetrical) form is quoted at *f*/7.7. When the combination consists, however, of two elements of equal focal power the intensity of the doublet is increased to *f*/6.3.

The three views engraved herewith—all reduced from 5 x 7 inch negatives taken from the same point of view—illustrate the chief qualities of the *Double Stigmat* in its threefold capacities. The view is on Fifth Avenue, New York, near 43d Street. No. 1 was made with the *No. 4 Double Stigmat*, 7-inch focus, and shows the work of the doublet at *f*/7.7. This combination consists of two elements of 10-inch and 15-inch focus respectively. No. 2 was made with the back lens of the combination alone — a lens of 10-inch focus. No. 3 was made with the front lens of the combination, having a focal length of 15 inches. The variation in the size of the buildings in each view will impress the reader with the usefulness of the unequal focal lengths made available in the *Double Stigmat*. The sharpness and rectilinearity of each image will also be observed. These little views, we may say, are inferior as a practical demonstration of the lens to the attractive *fac similes* of larger sizes put out by the manufacturers. They suffice, however, to prove the claims made for the new lens. The definition of the moving autocar and the various figures in each view testifies to the speed of the lens when used as a single lens or as a doublet.

One more point deserves mention. It is obvious that many different combinations may be made with lenses of different focal lengths. This is true. Any two elements not differing in focal length more than as 3 to 5 will combine with practical working advantages. The owner of a No. 6 (a 15-inch and a 22-inch combined to form a 10-inch doublet), for instance, can, with an element of 10 inches focal length, convert the No. 6 into a No. 4 (10-inch and 15-inch combined to make a doublet of 7 inches) by using the 10-inch element and the 15-inch element together, thus forming a doublet of 7-inch focal length. In such combination the elements of greatest focal length should be forced in front. When using a single element the proper position of the lens is at the back of the lens mount, with the convex face of the lens toward the sensitive plate.

With the *Double Stigmat* the problem

of obtaining a "battery" of lenses of the most modern type for all ordinary purposes without investing a small fortune is most happily solved. Mr. Gray is already well known as the inventor of the Extreme Angle Periscope. This new objective again puts American photographers under obligation to his inventive genius. We hope that his work will receive the reward it deserves.

FLOWERS AND FRUITS.

In the painter's art the rendering of what are termed still-life subjects, usually a representation of fruit, or game, or old junk, or the remains of a meal, has long been a favorite theme. It cannot be called high art; very often it is low art, followed because the artist cannot attain to more difficult subjects. It is one of those branches of work which falls in a very complete way into the domain of the photographer. The present may seem a somewhat unfavorable season of the year for speak.ng of floral work; but in its wider scope of fruits, including berries and the spray of trees, such work is very seasonable. In our cities, too, flowers are quite a part of our life, as witness the many photographs of chrysanthemums and orchids. The photography of flowers has followed, too much, certain conventions. There have been several leaders who have adopted a certain style, and these have been slavishly followed.

One believes that all flowers should be photographed before a dead-black background, others urge just the reverse. The photographer should bring discrimination to bear, and judge for each subject. To choose a perfect "bit" for a photographer is not always easy. Least difficult, perhaps, is to purchase some cut flowers from a florist, for such can be had in good condition. Flowers or fruits grown in the garden are not always free from defects by insects or by weather, but the real difficulty is to get a piece which composes well. In going to the florist—that is in handling a mere cut flower—we are begging the question. Much better than with a single flower, or an arrangement, is an actual plant, or a branch of fruit; and to get these requires some patient searching. It is easy to place an apple before the camera, or even to arrange a dish of apples, but to find a fruit-laden branch with the requisite possibilities, and to so arrange it that those possibilities are fully brought out, and recorded by the camera, is difficult.

Fruit is more in season now than flowers, and a good photograph of fruit or berries is a useful adjunct to Christmas-card photography. Photographs are best taken indoors. Long exposures, on a slow plate, and with lens fairly stopped down, give the best results. By working indoors we are free from movement from any breeze, and we have our light much more under control. Preferably the light should not be a south one. There is a wide choice of backgrounds, according to the color and nature of the subject and the wish of the photographer. For white flowers a slate-gray background is very suitable. For very dark flowers a white or light-tinted cream ground is good. Graduated backgrounds should be used very sparingly; no rules can be laid down as to when to use and when not. Black velvet is often used exclusively by some workers, and it gives a very bold, almost statuesque appearance to the flower. In this case the background should be close behind the flower. If placed a yard away the intervening "atmosphere" will have a perceptible graying effect. A lighter background should be placed some distance behind the flower—usually about a yard—to avoid any appearance of shadow on it, and to throw it completely out of focus.

In photographing fruit and berries we may meet with reflections from their polished skins (for though apples seldom shine until rubbed, some berries are naturally glossy and without bloom). A little reflection, even when translated by a white point, may be perfectly in keeping with the picture. But care must be used in carefully considering the point before going ahead. The lighting should usually be done from the side, and a reflector, carefully placed, will give a sufficient roundness and a relief to the shadow. A top light often gives an unnatural appearance,

FIRST PRIZE, CLASS 2, RAY FILTER COMPETITION.
W. F. Luick, Milwaukee.

and a front light gives flatness. Flowers of a delicate nature should be placed in a vase or dish of water, and whether this appears in the picture or not depends on the choice of the photographer. With sprays or branches of fruit the case is different. Fruit seldom grows—as flowers do —"up hill." The weight of the fruit bends the branch over—even if it were not pendant in the first place—until it droops toward the ground. For large limbs I use a little socket clamped to the edge of a shelf and working on a universal swivel. By this means the branch, held by a screw in the socket, can be turned in any direction, and held firmly by a turn of another screw. For smaller branches I use an empty bottle, into the neck of which the branch is firmly wedged by a cork or wad of paper. This bottle is then laid in a pan filled to the brim with sand. The neck of the bottle hangs over the edge of the pan, and a touch or two given to the sand will hold the bottle in any desired position. The pan is then placed on the edge of a shelf, or on a chair standing on the table.

A common mistake is to attempt too large a bunch of flowers; and if the flowers are of different kinds the difficulty is increased. Flowers are somewhat dependent on color and textures, and none but an experienced man can so arrange them that the result, translated into black and white, is satisfactory. Single sprays are not only the easiest, they are often the best.

Too much care cannot be given to obtaining the best arrangement of the flowers as seen from the ground-glass. For flowers containing any yellow or red color, orthochromatic plates should be used exclusively; and they are advisable for all flower work.

The different parts of the picture will be in different planes, and the lens must be well stopped down to ensure all parts of the picture being in sharp focus. Do not underexpose, and do not give a short exposure. If matters can be so arranged that two or three minutes is not too long for a light flower, the results will be the most satisfactory.

OUR English contemporary, the *Amateur Photographer*, has the following note on Mrs. Käsebier's work and prices:

"Incredible though it may appear, Mrs. Käsebier makes her art pay. Can it be that New Yorkers are really more tasteful than Londoners, or is it a mere fad which has seized on the fancy of the city of multi-millionaires? We cannot say. Sufficient is it that the said multi-millionaires do not hesitate to express their appreciation of Mrs. Käsebier's productions in a thoroughly practical and transatlantic manner. We believe we are correct in stating that twenty dollars for a single portrait is no very unusual fee at Mrs. Käsebier's studio. Yet, strange to say, this mysterious lady continues to have more work than she can tackle single-handed. Has the (photographic) millennium reached New York?

"Mrs. Käsebier received not long ago the highest price which has ever been paid for a single copy of a photograph. The picture in question was a portrait of Ellen Terry, taken during the eminent artiste's recent starring trip in the States. Ellen Terry was so pleased with the portrait—as indeed was everyone who saw it—that she cheerfully planked down a hundred-dollar bill for the privilege of calling it her own. Twenty pounds for one portrait print is enough to make our poor eighteen-shillings-the-dozen men green with envy. Later on another copy of the picture was bought by a private admirer of Ellen Terry (or Mrs. Käsebier, or both), and he paid the same stiff price. This creates a record; but America always was a record-breaking land!"

There are a few inaccuracies here. Mrs. Käsebier quotes a fee of "ten dollars for the sitting, which provides two prints from that sitting. All subsequent prints five dollars each." The wonder is, not that Mrs. Käsebier gets such a price, but that she makes such a price pay, for a print of hers means much careful thought, and often much individual work. Mrs. Käsebier is not a "fashion." She owes her position as a professional photographer not to the "multi-millionaire," but to the large numbers of educated and "refined" people who can in a measure understand and appreciate her work.

That too-much-talked-of one-hundred-dollar picture was not a portrait of Miss Ellen Terry, though this lady was, we believe, the first purchaser. It was a picture of a Madonna and child, and is commonly known as "the manger picture."

THE INTENSIFICATION AND AFTER-TREATMENT OF CARBON PRINTS.[1]

BY ERNEST HUMAN.

BY H. E. WATKIN, SCARBOROUGH, ENG.

It is my intention to-night to bring before your notice a few experiments made during the last few months in the intensification and after-manipulation of carbon prints.

I may say that, for the purpose of this paper, I have gone somewhat further into the matter than I otherwise should have done, and I shall endeavor to show you, at a later stage, that almost any color may be obtained on one class or color of tissue by the means of what are generally known as intensifiers—a word, by the way, that I rather object to, as, so far as I can see, carbon work is not intensified at all, so far as we understand the word.

What takes place, I think, is a dyeing of the gelatine contained in the tissue. I stand, however, open to correction on this point, which needs a more able chemist than myself to work out.

[1] A paper read before the London and Provincial Photographic Association, and reported in the Amateur Photographer.

But I am, perhaps, getting a little too far ahead, and, to enable me to show you a few results and how I obtain them, I ask you to bear with me a short time while I develop a few prints.

I take this course because I find the intensification, or dyeing, takes place much quicker, and the results are, I think, better when done direct from the last washing water than if the prints are allowed to dry first.

Now, in all books and writings on the carbon process I have access to, particular stress is laid upon the fact that the prints must not be touched by the fingers or anything during development.

Well, gentlemen, as I have at times some 400 to 500 prints to get through in the day, you can quite understand that I cannot give the time needed for automatic development that I should were I dealing with some six or seven, or working for mere pleasure.

The result is that more often than not I

hurry up development in the way I now show you, giving the prints first a short soaking in the hot-water.

I take, as you see, a common letter-book damper brush and sweep the spare pigment away quickly; another short soak, a gentle splash or two, and our print is finished.

this rough-and-ready way, owing to its lack of gelatine.

What is wanted is a tissue containing a fair amount of gelatine, a brush that is soft and free from grit, and a very, very light touch.

As my time to-night is limited I am, you will notice, omitting the usual alum bath.

PORTRAIT.

By H. E. Watkin, Scarborough, Eng.

I do not, of course, recommend this plan to everyone, or for every make of tissue. Elliott's is what I am using to-night and I have used throughout my experiments; but I would here say that their transparency tissue is not to be treated in

Here I have a 5 per cent. solution of potassium permanganate, and we shall find that after a few seconds in this solution our print has changed to a very nice deep purple, which color, during the final washing, which need not be more than three

or four minutes, will again change to a rather pleasing brown. By longer immersion in the permanganate bath, you can get the denser parts absolutely opaque.

The exact change that takes place I am not able to say, but possibly the permanganate is decomposed and an oxide of manganese formed.

Should you by any chance get your print too deep, you may reduce or discharge the color by an application of a weak solution of ammonium sulphide, as you see.

At this point, gentlemen, I had obtained exactly what I wanted at the time, and here I left the process until a few days ago, when I again took it up and went somewhat further, trying various aniline dyes, using both glass and celluloid as supports.

Speaking of celluloid reminds me of an article that appeared recently in one of the photographic journals, hailing, if I remember rightly, from an American source, to the effect that, by using this material as a base for the pigment, the safe edge and transfer might be done away with entirely by printing through the back, the celluloid being so thin as not to interfere with the sharpness of the image. I myself worked somewhat on these lines some two years ago, my method being to sensitize the tissue, squeegee on the celluloid, allow to dry and print through, and follow the usual mode of development.

I pass around one or two results so obtained, also a piece of opal for backing them up. You could, of course, use paper of various colors, or, in fact, any material for backing purposes, and some very pretty effects could no doubt be thus obtained. Those who object to the glazed surface might use matt celluloid, which is just as easy to obtain as plain.

Coming back again to the aniline dyes, I had intended to demonstrate their use here to-night; but the quantity of bottles and dishes required—about eighteen of each—prevented my doing so. So I must, perforce, content myself with the next best course, and show you results so obtained, the tissue used being Elliott's engraving black, and it has been treated with dyes as follows: Green, blue, brown, scarlet, magenta, violet, black, and mauve. You will see from these that an almost endless variety of colors may be obtained.

For the dyes I have not yet looked for any reducer or discharging chemical.

As to their permanency, I see no reason why they should not be so, provided, of course, that your dye is not a known fugitive, or, at any rate, made so by the use of a mordant—chrome alum or tannic acid, for instance.

Bromide Paper. It may not be inappropriate, says the *Amateur Photographer*, to try and arouse the many users of bromide papers to strive for something better than they usually get. For really first-rate work, say, for instance, for a great exhibition, bromide is not in favor, and the indifferent character of the results one sees might fully justify this disparagement; yet is it quite certain that the best that bromide will yield is usually obtained? We think not. The man who will use any brand of bromide paper, and to whom the chief recommendation of a developer is that it is stainless and does not require an acid bath, and is, therefore, simpler, is yet mighty particular about the brand of plates and the particular formula with which he develops his negatives; but the same striving for something better than is at once and commonly obtained, even if greater care is needed, seems very rare among the thousands who during winter months use bromide papers. The cheap and common look of the bromide enlargement, if it cannot be overcome, must always, in the presence of prints in platinotype from enlarged negative, take second place. Beyond doing his best when working on the prescribed lines, we know of hardly anyone who, having set himself a high standard, short of which he will not be content, has systematically striven to arrive there with bromide paper, and such exercise would surely form a very desirable occupation for the coming winter. Contentment with just fairly good photography, believing that to avail one's self of the convenience and rapidity of bromide one must put up with indifferent quality, is the first thing to suppress if an endeavor for its improvement is to be successful.

A useful retouching medium is oil of turpentine 1 part, oil of lavender 2 parts, resin 1 part. Dissolve and filter.

THE TIME OF SNOW.

WINTER is on us, and most photographers are looking forward to a busy and prosperous time. Many of them will make

By W. H. Towles, Cumberland, Md.

a number of snow pictures—I am speaking of studio portraiture—and some of those who will not ought to do so. We are safe to have snow, at least in our northern latitudes, and this means winter garments. The toboggan for a children's picture is an old idea, but it is still effective, and winter scenes will never lose their popularity. One fortunate feature of a winter outfit is its lack of cost. An old background of an out-door scene—one too old for anything else—needs nothing but a little judicious chalking to make it a real snow landscape. With the chalk mark the upper surfaces of trees or fences or wherever snow would be likely to stick. Do not overdo it, and you have a snow scene. When spring comes the "snow" can easily be cleaned off. Any accessories can be made seasonable by the help of a few sheets of cotton wadding, and something similar or a piece of a white background will make a suitable ground. The *British Journal* regrets that snow pictures are not more often tried as business bringers in England.

Furs and fur-trimmed costumes lend considerable scope to the photographer, as they tell well in the pictures, and should be freely utilized in specimens of winter portraits. The introduction of a pair of skates will also add to the effect of the winter portrait.

In many of the Canadian, American, and Russian pictures the appearance of falling snow has been depicted—*i. e.*, flakes of snow falling thickly on and around the sitter. This, it need not be said, is done by "faking" the negative; but it is easily done by splashing on or distributing over the finished negative an opaque pigment. One of the best methods, perhaps, is to take Chinese white, as sold in tubes by the artists' colormen, and thin it with water on a palette; then take an ordinary toothbrush and touch the ends of the bristles on the palette so as to just take up a little of the pigment, and then, in front of the negative, pass, say, the back of a knife across the bristles so as to flick the color on to the negative in fine particles. Before doing this it is desirable to varnish the negative, as then, if the result is not satisfactory, the pigment can be cleaned off and a fresh essay made; whereas, if it were not varnished, it could not be effectually done.

In some of the pictures of this kind the snow is depicted as falling everywhere except before the face of the subject, which

By W. H. Towles, Cumberland, Md.

gives the picture a highly incongruous appearance. Yet, of course, the portrait is the main feature to be considered in the picture. This trouble may, however, be avoided, and yet the portrait retained, in the following way: Let the sitter hold a small umbrella over the head, though not too forward so as to obstruct the light. In this way the face will not be represented free from the snowflakes and at the same time be free from incongruity. The umbrella, which may be a stock one, should be thinly covered with the white wadding, stitched on, so as to be in unison generally with the picture.

Snow pictures are so much a matter of a little personal ingenuity and so entirely devoid of any question of expense that they ought to be one of the resources of every photographer whoever has time to think of how to increase his business.

Mounts. Now that so many various papers are used for mounts it is well to recall an old test for wood pulp—a very fugitive ingredient of cheap paper. Moisten the paper with a weak and slightly alkaline solution of hydrochlorate of aniline. If wood pulp is there a yellow stain will slowly appear.

To remove a film from a cracked glass, support the cracked glass on a sound piece, and immerse in a 1 per cent. solution of hydrochloric acid. The film will begin to frill and may be loosened by gently working it from the glass from the edges inward. The film will be enlarged and should be immersed in 20 per cent. of wood alcohol in water to reduce to normal size. Then float it on to a sheet of glass well cleaned and gelatinized; let it spread evenly on it, and stand aside to dry.

PRACTICAL METHODS AND FORMULÆ.

To produce pictures is only one of the accomplishments of photography—and wonderful pictures they are, pictures that move, nay, figures that can laugh and frown and dance and dive and kick and run, and all the rest of it. It is also shown that in tasteful and artistic hands many qualities of art can be produced by it. Why, then, need there be any dispute about the relative merits of each? Both are beautiful, both are necessary to the world. Why, then, to the detriment of both, try to prove them one and the same thing, which they are not and never can be?—G. A. Storey, *A. R. A.*

A little mounting paste smeared over the back of a negative gives a rough-and-ready but temporary matt varnish.

For all commercial work—photographing machinery, silverware, fabrics, wood,

leather, etc.—non-halation or backed plates should be used. Their use is growing and will continue to grow. For flash-light work orthochromatic plates are very suitable, their sensitiveness to yellow rays being all in favor of speed with artificial light.

The copying of drawings or printed matter is fraught with many failures. Try using a very small diaphragm, very careful focusing, and a blue screen. After fixing dip into a reducing bath (hypo and ferrocyanide) to clear the lines.

The man who wants to increase his business must be wide awake all the time, and hustling much of the time.

It is said that the Eastman Kodak Co., in its capacity of "doing the rest," develops more babies than landscapes, and more children than everything else put together, which only shows that photographers who specialize on baby photography should be prosperous and happy.

The use of a colored ground for carbon prints may come to the fore in pictorial photography. Where, as in night pictures, etc., the prevailing illumination gives practically a monochrome effect, very forceful results may be obtained.

In wave photography a small stop, with a comparatively longer exposure, gives best results. If some of the most rapidly driving spray is not in focus, the effect will not be impaired.

A good matt varnish is made of sandarac ½ ounce, Canada balsam 1 drachm, sulphuric ether 7 ounces, benzole 3 ounces. Apply the varnish, cold, to the back of the negative.

Chemical Vignetting of Prints. The Amateur Photographer quotes M. Gosselin on chemical control in printing as a more mobile method of vignetting than the usual shape, or even the special vignette made from paper and cotton wadding. As might be expected, control in chemical vignetting is most complete in the case of developed bromide prints, including Velox and similar papers, and it becomes impracticable in the case of prints considerably toned with platinum. The procedure is to moisten the print and lay it on a flat surface of porcelain or glass, the level bottom of a dish much larger than the sheet being very suitable. The edges of the print, where one wishes to remove the impression, are now painted over with a solution of iodine in water, the iodine being rendered more soluble by the addition of iodide of potassium; water 100 parts, iodide of potassium 10 parts, and iodine 2 parts, being a suitable mixture. This acts more slowly than an alcoholic solution of iodine, and gives correspondingly more control. The iodine solution can be applied very freely to the extreme edges if complete obliteration is intended, and water can be applied with a second brush around the margin of the area where full vigor is desired, the use of mops or dabbers giving a very complete control. Of course, the print can be rinsed at any stage and examined. Should the paper be sized with any starchy substance, a blue tint will appear where the iodine acts, but the extinction of the image can be readily traced in spite of this. A final soaking in weak hyposulphite serves to remove the blue color, after which the print must, of course, be washed. One advantage of the aqueous iodine solution over alcoholic iodine and preparations containing cyanide is the fact that any paper may be treated without fear of disintegrating the surface. Slight toning with gold does not interfere much with the chemical vignetting, but makes it somewhat slow.

Sometimes a ferroprussiate print has a slight rusty tinge to mar the purity of its blue. This appears to be due to impurity or "hardness" in the wash-water, and will be got rid of if a few drops of peroxide of hydrogen are added to the final washing-water.

Glycerine, good to prevent the curling of films, is equally useful for unmounted prints. After the final washing immerse the print in water 1 ounce, glycerine 3 ounces, alcohol 3 ounces. When dry the prints will not curl.

Tank development is coming rather to the fore at present, and it has many enthusiastic supporters—and not without reason. A simple non-staining developer is given in *Photographische Rundschau*. Five

per cent. solutiom of pyrocatechin 1 part, 10 per cent. solution carbonate of potash 1 part, water 50 parts. With a normal exposure, three hours' immersion will give a clear, satisfactory negative.

The staining power of pyro is one of the objections of the amateur. It is often suggested to dabble the finger-tips in a weak acid solution. It would seem that it is the moisture rather than the acidity which helps. Dry skin will readily absorb moisture, and if the moisture contains a stain the stain accompanies into the skin. But if the fingers are first soaked in water, and from time to time wetted or rinsed—dipping in a bowl of water is sufficient—the staining tendency of pyro will be found but slight.

Pyro Development. In *Der Amateur Photograph* an article is published concerning pyro development which is well worth consideration. The writer alludes to the fact that photographers are returning to pyro, and that this tendency cannot be due to pure conservatism. R. E. Liesegang has often referred to the compound nature of the image formed by pyro development, the negative being composed of metallic silver *plus* stain. This almost eliminates the risk of over-exposure. On the other hand, pyro is recommended by manufacturers of shutters as the best developer for instantaneous work. These two extremes suggest that pyro is probably the developer giving most latitude. In cases of over-exposure, a stale developer is recommended. Bromide of potassium merely retards, but stale pyro corrects. The following question was recently asked by Dr. Seitz: "Should development be adjusted to exposure, or exposure adjusted to development?" The writer answers: "In studio work, where the exposure can be accurately timed, the latter should be made to correspond with the developer, which should be very energetic. By such means the exposure may be reduced, and time saved in development. In work, however, where violent contrasts of light and shade exist, the development must be modified and suited to the exposure."

The busy photographer is a good business man; business ability goes further than much art.

A simple device for producing plate-sunk effects is suggested in *Photo Correspondenz.* To those photographers who trim pictures unusual sizes and then mount them it may prove useful. A flat rule is fastened, by a hinge, to a board of suitable length; the other end of the rule is provided with a thumbscrew, by means of which it may be firmly secured to a board. The mounted print is firmly clamped between the rule and the board to represent the plate mark. A wooden block, resembling in shape the head of a claw-hammer, is then passed along the surface of the mount, with some pressure, next the straight-edge. Each of the four sides is treated in this manner, and the effect is an impression resembling the mark produced by a plate in the press. If a sheet of paper is laid upon the print before the pressure block is applied the cardboard will retain its original appearance, but otherwise the surface will be burnished.

EDITOR'S TABLE

We are pleased to learn that the new buildings of the Mechanics' Institute, Rochester, N. Y., endowed so generously by Mr. George Eastman a few months ago, are progressing finely. It is expected that they will be ready for service early in January next.

Obituary.—We regret to record the death of Mr. Albion K. P. Trask, one of the pioneer photographers of Philadelphia, who for years was a well-known figure in the local fraternity. Mr. Trask was born in Bangor, Maine, in 1830. As a young man he was a farmer, but later carried on a livery stable business. Just before the Civil War he acquired a knowledge of daguerreotyping. During the war he served with a regiment from his native State. Settling in Philadelphia with his family in 1865, he started a studio on Eighth Street, and was one of the earliest exponents of the ferrotype. In 1872 he published the *Practical Ferrotyper*, now in its seventeenth edition. Later he moved to Chestnut Street, continuing in active

business until 1891, when he retired, owing to ill-health. Many of the prominent photographers of to-day served an apprenticeship under him. A wife and daughter survive him, to whom our sympathy is extended.

THE famous Strauss Studio, St. Louis, destroyed by fire some months ago, is being rebuilt on a still grander scale than before. Mr. STRAUSS sends word that he hopes soon to resume work at the old stand. The St. Louis *Mirror* says: "The ruins of the former studio were not unsightly in the least, because the architect who put up the building originally had put art into it, and even in its dismantled condition it retained a certain quality of picturesqueness. The work of clearing away the useless part of the wreck has been begun. The main walls of the building were not injured by the fire, and the general lines of the structure are still graceful and effective upon the eye, as they are fit for supporting a new interior structure. The interior was rich and tasteful before, but it will be more so in the new building. The waiting-rooms, galleries, operating-rooms, lodges, and nooks will be sumptuously fitted up and will be a delight to the eye of Mr. STRAUSS' patrons, and will make an especially interesting exhibit to strangers in the city. All honor and success to Mr. STRAUSS for his enterprise."

THE GRAY STUDIO, MEMPHIS.—Among the signs of the times which show how skilfully our better photographers are giving attention to the business end of the profession comes the following announcement from Mr. WALTER L. GRAY, of Memphis:

Mr. Walter L. Gray
desires to announce the opening of
Gray's Studio
where those who appreciate the
artistic in photography
may find
work equal to that produced by the
famous studios of the East.
The studio will occupy the
entire new building
at the corner of Poplar & Manassas Streets
(*Brinkley Homestead*),
Memphis.

This was engraved in copperplate, upon heavy paper, after the fashion of an announcement of a social affair, and conveyed a very favorable impression. In a later issue we plan to give details of Mr. GRAY'S venture into the professional field, in which he has our cordial good wishes.

THE November number of the *Photo-Pivot*, free on application of Mr. RALPH J. GOLSEN, Chicago, is a special lens number, and contains a "Bargain List" of over 1200 lenses. In this great display surely all lens buyers can meet all their requirements. Send for a copy.

THE N. J. ARISTOTYPE CO., formerly of Bloomfield, N. J., requiring larger facilities to meet the increased demand for its famous *Albuma* paper, has removed its plant to Nepera Park, N. Y., where the world-renowned *Velox* is made.

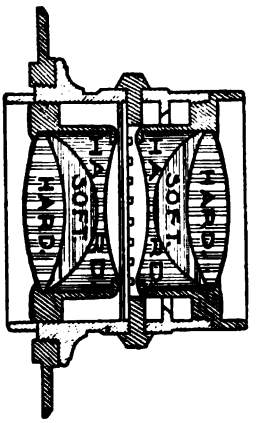
THE PHOTOGRAPHIC TIMES PUBLISHING ASSOCIATION, New York, make the announcement that for some time they have been in constant receipt of complaints regarding the unwieldiness of the *Photographic Times*. They therefore decided to reduce it to the standard magazine size and the subscription price from four dollars to two dollars per annum. Notwithstanding this reduction in price, there will still be the same number of profusely illustrated pages, and the photogravure frontispiece (a feature of the publication) will still be given. Mr. WALTER E. WOODBURY, its former editor of over six years, will again occupy the editorial chair.

PENROSE'S *Process Year-Book* for 1900 is promised for December, and, judging from the announcements, will be an exceedingly attractive annual. A circular giving the contents may be had from Messrs. TENNANT & WARD, 289 Fourth Avenue, New York.

NEW editions of *Quarter Century in Photography* and WILKINSON'S *Photo-Engraving*, *Photo-Etching*, etc., are in press and will be ready shortly. The demand for these well-known standard text-books grows larger year by year, and our sales during the past few months have been larger than ever before at this season. Detailed contents lists can be obtained from our agents, Messrs. TENNANT & WARD.

MR. C. W. JUDD, an old subscriber, formerly located at San Diego, Cal., has opened an establishment in Denver, Colo., for carbon, bromide, and specialty printing for the trade.

TWO POINTS



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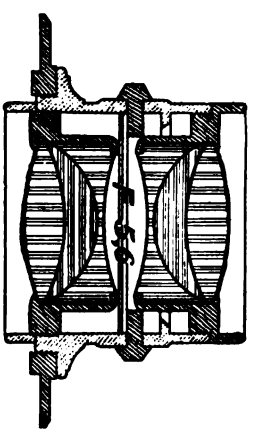

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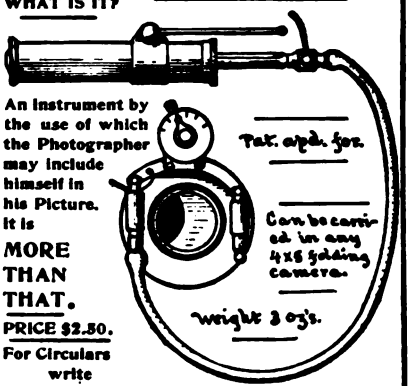

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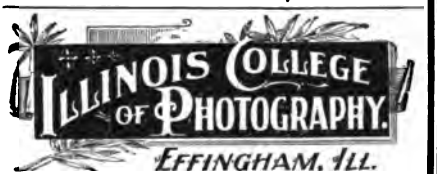

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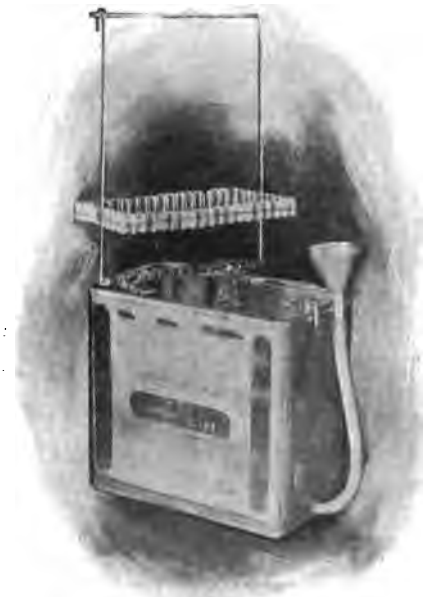

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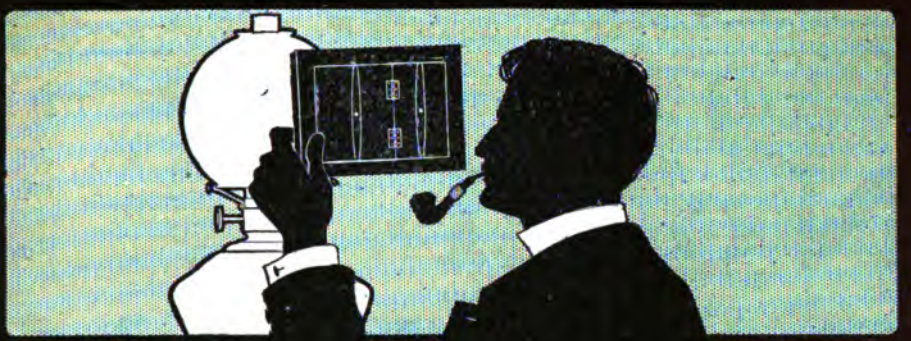

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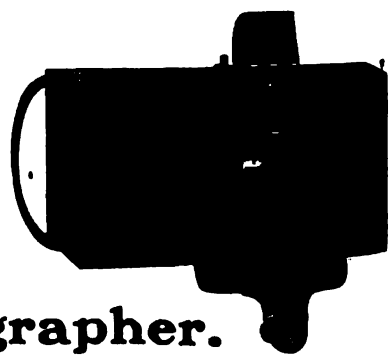

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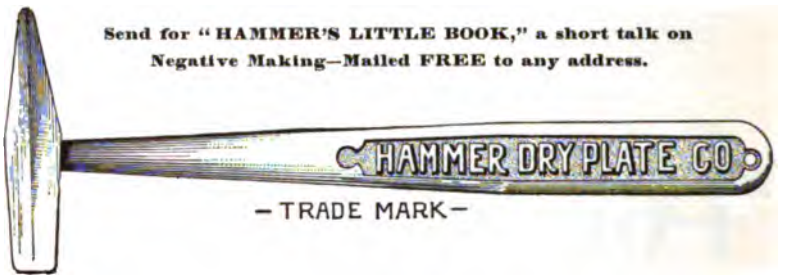

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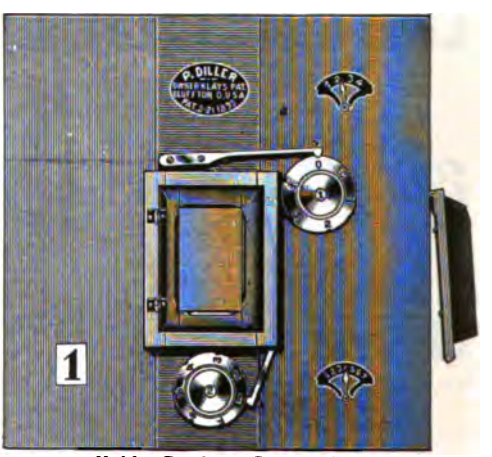

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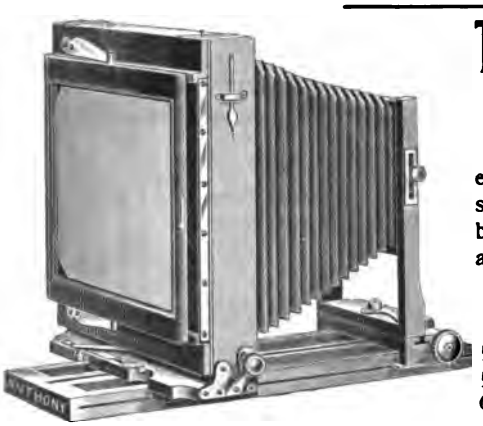

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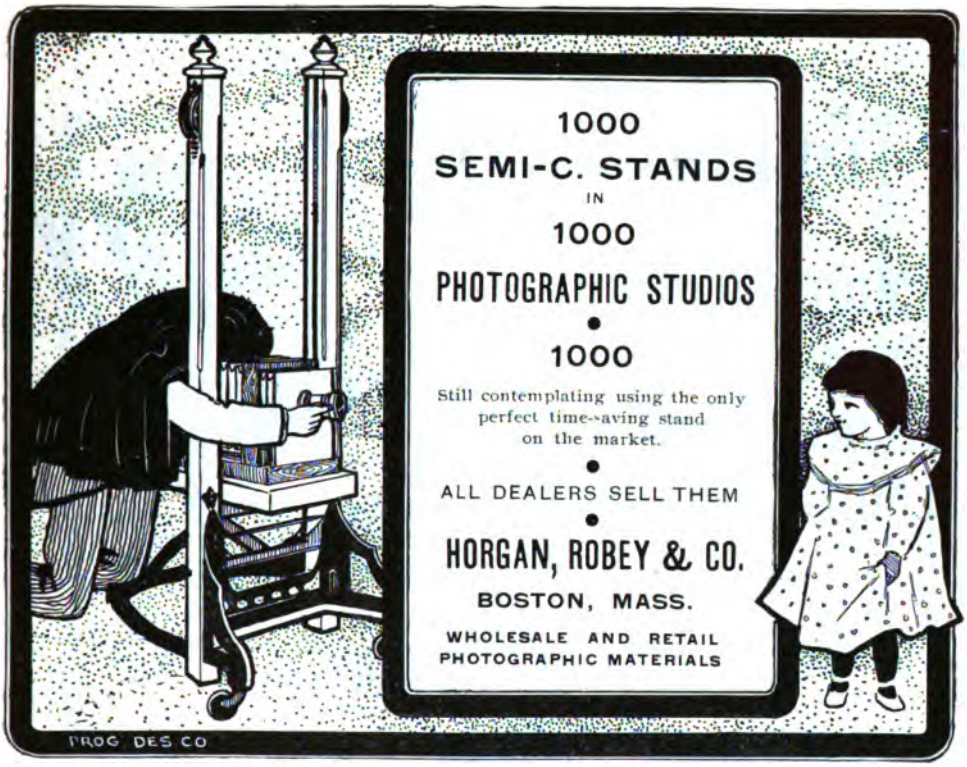

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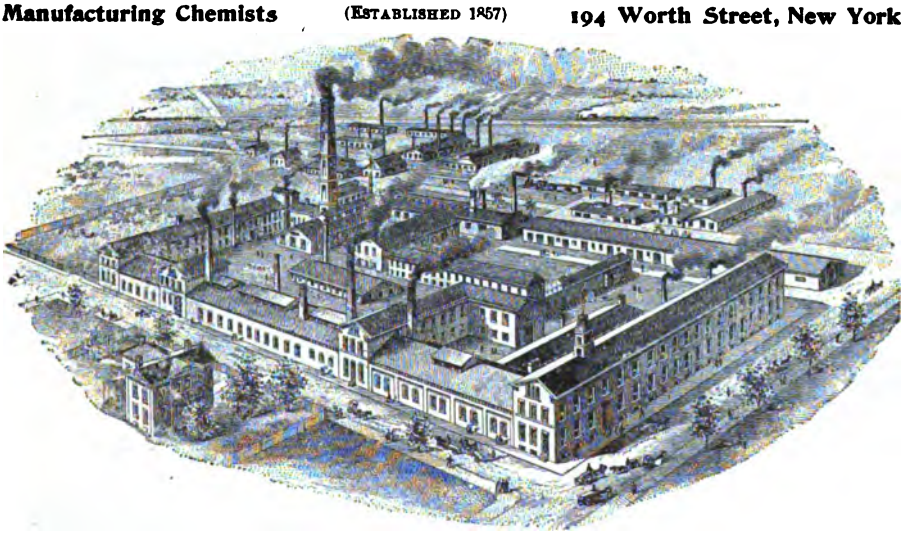

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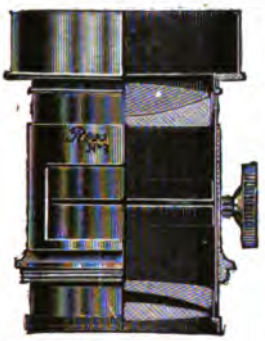

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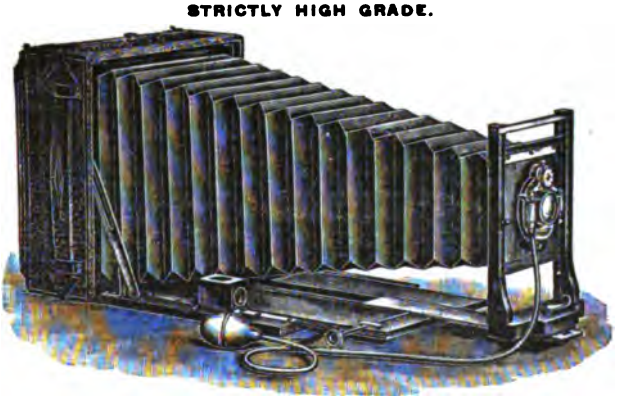

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